

on Business card

THE
INDUSTRIALIST

Vol. 37

Saturday, October 1, 1910

No. 1

Issued Weekly By
Kansas State Agricultural College
Manhattan, Kansas



~~~~~  
*Published by*  
**PRINTING DEPARTMENT**  
*J. D. Rickman, Supt."*

Entered at post-office, Manhattan, Kan., as second-class matter. Act of July 16, 1894.

# THE INDUSTRIALIST.

|                         |                 |
|-------------------------|-----------------|
| PRES. H. J. WATERS..... | Editor-in-Chief |
| PROF. C. J. DILLON..... | Managing Editor |
| DR. J. D. WALTERS.....  | Local Editor    |
| DR. J. T. WILLARD.....  | Alumni Editor   |

## BOARD OF REGENTS.

|                                                       |              |
|-------------------------------------------------------|--------------|
| HON. W. E. BLACKBURN, President.....                  | Anthony      |
| HON. J. O. TULLOSS ['99], Vice-President.....         | Sedan        |
| HON. EDWIN TAYLOR.....                                | Edwardsville |
| HON. ARTHUR CAPPER.....                               | Topeka       |
| HON. A. L. SPONSER.....                               | Hutchinson   |
| HON. TOM BLODGETT.....                                | Wichita      |
| PRES. H. J. WATERS, Secretary <i>ex-officio</i> ..... | Manhattan    |

## BOARD OF INSTRUCTION.

|                                       |                                                                                                                    |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Henry Jackson Waters, B. S. A.....    | President of the College                                                                                           |
| John Daniel Walters, D. A. ....       | Professor of Architecture and Drawing                                                                              |
| Julius Terrass Willard, D. Sc.....    | Dean of Science, Professor of Chemistry                                                                            |
| Joshua Douglas Rickman.....           | Superintendent of Printing                                                                                         |
| Benjamin Luce Remick, Ph. M. ....     | Professor of Mathematics                                                                                           |
| Benjamin Franklin Eyer, E. E.....     | Professor of Electrical Engineering                                                                                |
| Herbert Fuller Roberts, M. S. ....    | Professor of Botany                                                                                                |
| William Arch McKeever, Ph. M.....     | Professor of Philosophy                                                                                            |
| Edmund Burke McCormick, B. S.....     | Dean of Mechanic Arts, Director<br>Engineering Experiment Station, Professor of Power and Experimental Engineering |
| Albert Dickens, M. S.....             | Professor of Horticulture                                                                                          |
| Clark Mills Brink, Ph. D.....         | Prof. of Eng. Language and Lit, Dean of the Coll., Asst. to Pres.                                                  |
| Albert Moore Ten Eyck, M. S.....      | Prof. of Farm Mgt., Supt. Ft. Hays Branch Agr. Exp. Sta.                                                           |
| Ralph Ray Price, A. M.....            | Professor of History and Civics                                                                                    |
| Julius Ernest Kammeyer, A. M.....     | Professor of Economics and Director of Public Speaking                                                             |
| John Vanzandt Cortelyou, Ph. D.....   | Professor of German                                                                                                |
| Olof Valley, B. M.....                | Professor of Music                                                                                                 |
| Francis S. Schoenleber, D. V. S.....  | Professor of Veterinary Medicine                                                                                   |
| Roland Jacob Kinzer, B. S. A.....     | Professor of Animal Husbandry                                                                                      |
| John Harold Miller, A. M.....         | Superintendent of Agricultural Extension                                                                           |
| Thomas J Headlee, Ph. D.....          | Professor of Entomology and Geology                                                                                |
| Charles Henry Boice.....              | First Lieutenant U. S. A., Professor of Military Science                                                           |
| John Orr Hamilton, B. S. ....         | Professor of Physics                                                                                               |
| Mary Pierce Van Zile.....             | Professor of Domestic Science and Dean of Women                                                                    |
| Edwin Harrison Webster, M. S. ....    | Director of Agr. Exp. Sta. and Dean of Agriculture                                                                 |
| Lowell Edwin Conrad, M. S.....        | Professor of Civil Engineering                                                                                     |
| Antonetta Becker.....                 | Professor of Domestic Art                                                                                          |
| Charles A. Scott, B. S.....           | State Forester                                                                                                     |
| Leslie Arthur Fitz, B. S.....         | In Charge of Department of Milling Industry                                                                        |
| Edwin Lee Holton, A. B.....           | Professor of Rural Education, Extension Department                                                                 |
| Andrey Abraham Potter, B. S.....      | Professor of Steam and Gas Engineering: In Charge of Course in Mechanical Engineering                              |
| Roy Andrew Seaton, M. S. t.....       | Professor of Applied Mechanics and Hydraulics                                                                      |
| W. M. Jardine.....                    | Professor of Agronomy, Superintendent of Farm                                                                      |
| Gertrude A. Barnes.....               | Librarian                                                                                                          |
| Francis Hervey Slack, M. D.....       | Professor of Bacteriology                                                                                          |
| Blanche Earl Enyart, A. B.....        | Director of Physical Training for Women                                                                            |
| Charles J. Dillon.....                | Professor of Industrial Journalism                                                                                 |
| James William Searson, A. M.....      | Associate Professor of English                                                                                     |
| Jacob Lund, M. S.....                 | Superintendent Heat and Power Department                                                                           |
| Robert Henry Brown, B. M.....         | Assistant Professor of Music                                                                                       |
| George Adam Dean, M. S.....           | Assistant Professor of Entomology                                                                                  |
| William Hiddleston Andrews, A. B..... | Assistant Professor of Mathematics                                                                                 |
| George Carpenter Wheeler, B. S.....   | Lecturer on Farm Management, Agr. College Ext. Dept.                                                               |
| Leland Everett Call, B. S. A.....     | Assistant Professor of Soils                                                                                       |
| Pleasant E. Crabtree.....             | Lecturer on Farm Management, Agr. College Ext. Dept.                                                               |
| Kirk Whitney Stouder, D. V. M. ....   | Assistant Professor of Veterinary Medicine                                                                         |
| Leonard Whittlesey Goss, D. V. M..... | Assistant Professor of Veterinary Medicine                                                                         |
| Ula May Dow, B. S.....                | Assistant Professor of Domestic Science                                                                            |

\*Beginning September 1, 1910. †On leave of absence during season 1910-'11.



|                                       |                                                                       |
|---------------------------------------|-----------------------------------------------------------------------|
| Herbert Hiram King, A. M.             | Assistant Professor of Chemistry                                      |
| John Bennett Whelan, A. M.            | Assistant Professor of Chemistry                                      |
| Robert John Barnett, B. S.            | Assistant Professor of Mathematics                                    |
| Louis Henry Beall, A. B.              | Assistant Professor of English Language and Literature                |
| George Eben Bray, M. E.               | Asst. Prof. of Shop Methods and Practice, Superintendent of Shops     |
| Wilmer Esia Davis, A. B.              | Assistant Professor of Botany                                         |
| Franklin George King, B. S. A.        | Assistant Professor of Animal Husbandry                               |
| Charles Oscar Swanson, M. Agr.        | Assistant Professor of Agricultural Chemistry                         |
| O. E. Reed, B. S. A.                  | Assistant Professor of Dairy Husbandry                                |
| Clarence Victor Holsinger.            | Lecturer on Horticulture, Agricultural College Extension Dept.        |
| Frances Langdon Brown, B. S.          | Lecturer on Domestic Science, Agricultural College Ext. Dept.         |
| Walter Scott Gearhart, B. S. in C. E. | Highway Engr., Agricultural College Ext. Dept.                        |
| Geo. S. Hine, B. S. A.                | Dairying, Farmers' Institute Department                               |
| W. B. Walker, B. S. in C. E.          | Drainage Engineer, Farmers' Institute Department                      |
| Ada Rice, B. S.                       | Instructor in English                                                 |
| Ella Weeks, A. B.                     | Instructor in Drawing and in Color and Design                         |
| Daisy Dorothy Zeininger, A. B.        | Instructor in Mathematics                                             |
| Leland David Bushnell, B. S.          | Instructor in Bacteriology                                            |
| Michael Francis Ahearn, B. S.         | Instructor in Horticulture                                            |
| Burton Ray Rogers, D. V. M.           | Instructor in Veterinary Science                                      |
| Kirk Harold Logan, A. B.              | Instructor in Physics                                                 |
| Ina Foote Cowles, B. S.               | Instructor in Domestic Art                                            |
| Gertrude Stump, B. S.                 | Instructor in Domestic Art                                            |
| Annette Leonard, A. B.                | Instructor in English                                                 |
| William Leonard House                 | Instructor in Woodwork, Foreman of Carpenter Shop                     |
| Ambrose Elliot Ridenour, B. S.        | Instructor in Moulding, Foreman of Foundry                            |
| Jeremiah Haffer Hollar                | Instructor in Forging, Foreman of Blacksmith Shop                     |
| Raymond Garfield Taylor, A. B.        | Instructor in History and Civics                                      |
| Leonard Marion Peairs, M. S.          | Instructor in Entomology                                              |
| Robert Kirkland Nabours, Ed. B.       | Instructor in Geology                                                 |
| Ina Emma Holroyd, B. S.               | Assistant in Mathematics                                              |
| Amanda Katharin Tinkey                | Assistant Librarian                                                   |
| Earl Nathaniel Rodell, B. S.          | Assistant in Printing                                                 |
| Charles Yost                          | Foreman of Boiler Room                                                |
| John Thompson Parker                  | Assistant in Woodwork                                                 |
| Edgar George Meinzer, A. M.           | Assistant in German                                                   |
| Hugh Oliver                           | Assistant in Heat and Power Department                                |
| Charlaine Furley, A. B.               | Assistant in English                                                  |
| Jessie Annaberta Reynolds, A. B.      | Assistant in History                                                  |
| William Carl Lane, B. S.              | Assistant in Electrical Engineering                                   |
| Flora Cornelia Knight, A. B.          | Assistant in History                                                  |
| Margaret Anna Mack                    | Assistant in History and Civics                                       |
| Chester Allen Arthur Utt, M. S.       | Assistant in Food Analysis                                            |
| James Arthur Milham, B. S.            | Asst. in Animal Husbandry, Ft. Hays Branch Agr. Exp. Sta.             |
| Anna Wilkinson Gordon, A. B.          | Assistant in History                                                  |
| Samuel Wilson McGarrah, A. M.         | Assistant in Mathematics                                              |
| Harrison Elazer Porter, B. S.         | Assistant in Mathematics                                              |
| John Bernard Parker, A. M.            | Assistant Entomologist                                                |
| Claude Carroll Cunningham, B. S.      | Agronomist Ft. Hays Branch Agr. Exp. Station                          |
| Fred Montreville Hayes, D. V. M.      | Assistant in Veterinary Medicine                                      |
| Bertha Lillias Donaldson              | Assistant in Domestic Art                                             |
| Christian Jensen                      | Asst. State Forester, Ft. Hays Branch Agricultural Experiment Station |
| Hiram R. Reed, B. S.                  | Superintendent Garden City Coöperative Experiment Station             |
| Burton Sylvester Orr, B. S.           | Assistant in Power and Experimental Engineering                       |
| Elmer Johnson, B. S.                  | Assistant in Power and Experimental Engineering                       |
| Elizabeth Wilson Putnam               | Assistant in Drawing                                                  |
| Jules Cool Cunningham, B. S.          | Assistant in Horticulture                                             |
| Annie Elsie Lindsey                   | Assistant in Domestic Science                                         |
| Raymond Clifford Wiley, B. S.         | Assistant in Chemistry                                                |
| Thomas Powell Haslam, B. S.           | Assistant in Veterinary Science, Agr. Exp. Sta.                       |
| Amy Alena Allen, B. S.                | Assistant in Printing                                                 |
| Porter Joseph Newman, B. S.           | Assistant in Chemistry                                                |
| Clarence Ward Nash, B. S.             | Assistant in Crops                                                    |
| Charles James T. Doryland, B. S.      | Assistant in Soils                                                    |

|                                                                  |                                                               |
|------------------------------------------------------------------|---------------------------------------------------------------|
| Helen Knostman Huse, B. S.                                       | Assistant in Domestic Science                                 |
| Edison Frank Kubin, D. V. M.                                     | Assistant in Veterinary Medicine                              |
| Atsushi Miyawaki, M. S.                                          | Assistant in Experimental Dairying                            |
| Ethel Byerly,                                                    | Assistant in Domestic Art                                     |
| Thomas George Patterson, B. S. A                                 | Assistant in Animal Husbandry                                 |
| Jessie Gulick.                                                   | Assistant Librarian                                           |
| Mary Mudge, B. S.                                                | Assistant in Library                                          |
| Estella May Boot, A. M.                                          | Assistant in English                                          |
| James Russell Jenness, B. S.                                     | Assistant in Physics                                          |
| Ada Marie Baum.                                                  | Assistant in Music                                            |
| Ethel Kate May Ping                                              | Assistant in Music                                            |
| Everett Parker Johnston, A. B.                                   | Assistant in Public Speaking                                  |
| Dean Humboldt Rose, A. M.                                        | Assistant in Botany                                           |
| Madge Kay, B. S.                                                 | Assistant in Mathematics                                      |
| Don Olmsted Stone, C. E.                                         | Assistant in Civil Engineering                                |
| Paul Weidemeyer Graff, B. S.                                     | Assistant in Botany                                           |
| Turner R. H. Wright, B. S. A.                                    | Assistant in Animal Husbandry                                 |
| Alfred Everett White, M. S.                                      | Assistant in Mathematics                                      |
| Charlotte Augusta Morton, B. S.                                  | Assistant in Drawing                                          |
| Frank Clyde Harris, B. S.                                        | Assistant in Architecture and Drawing                         |
| James Henry Burt, V. S.                                          | Assistant in Veterinary Medicine                              |
| Florence Warner, A. B.                                           | Cataloguer in Library                                         |
| John Willard Calvin, B. S.                                       | Assistant in Animal Nutrition                                 |
| Carl Fred Chase, B. S.                                           | Assistant in Agronomy                                         |
| Ella Frances Miles                                               | Assistant in Domestic Science                                 |
| Alanson L. Hallsted, B. S.                                       | Asst. in Dry Farming in Coöp. with U. S. Dept. of Agriculture |
| Floyd E. Wilson, B. S.                                           | Assistant in Heat and Power                                   |
| A. L. Harris                                                     | Assistant in Heat and Power                                   |
| B. F. Howenstine                                                 | Assistant in Heat and Power                                   |
| Walter W. Carlson, B. S.                                         | Foreman Machine Shop                                          |
| Thornton Hayes                                                   | Assistant in Machine Shop                                     |
| Charles Jablow, M. E.                                            | Assistant in Machine Design                                   |
| Geo. E. Wallis, S. B.                                            | Assistant in Experimental Engineering                         |
| Josiah Simson Hughes, M. A.                                      | Assistant in Chemistry                                        |
| Charles Ernest Millar, B. S.                                     | Assistant in Chemistry                                        |
| Charles Henry Clevenger, S. M.                                   | Assistant in Mathematics                                      |
| Arthur Roy Fehn, Ph. B.                                          | Assistant in Mathematics                                      |
| William Timothy Stratton, A. B.                                  | Assistant in Mathematics                                      |
| Ada A. Noyes, B. S.                                              | Assistant in Domestic Science                                 |
| Stella May Stephens, B. S.                                       | Assistant in Domestic Science                                 |
| Laura Boynton Storms, B. S. in D. E.                             | Assistant in Domestic Science                                 |
| Jennie Agnes Humphrey                                            | Assistant in Domestic Science                                 |
| Nelson A. Crawford, Jr., A. B.                                   | Assistant in English                                          |
| Edwin George Schafer, B. S.                                      | Assistant in Agronomy                                         |
| Edwin F. Miller                                                  | Assistant in Botany                                           |
| George K. Link                                                   | Assistant in Botany                                           |
| T. E. Schreiner                                                  | Assistant in Dairy Husbandry                                  |
| A. W. Rudnick                                                    | Assistant in Dairy Husbandry                                  |
| Freeman S. Jacoby                                                | Assistant in Poultry Husbandry                                |
| George E. Raburn                                                 | Assistant in Physics                                          |
| Clare Biddison, B. S.                                            | Assistant in Music                                            |
| George August Westphalinger, Chief Musician U. S. Army (retired) | Band Leader                                                   |
| Margaret Anna Butterfield                                        | Secretary                                                     |
| William Riley Lewis                                              | Custodian                                                     |
| Francis John Turner                                              | Foreman Ogallah Branch Forestry Station                       |
| Edward Claeren, Commissary Sergeant. U. S. Army (retired)        | Assistant to the Commandant                                   |
| Alexander Edgar                                                  | Herdsmen                                                      |
| Aaron Purdy                                                      | Dairy Herdsman                                                |



# THE INDUSTRIALIST

---

VOL. 37.

MANHATTAN, KAN., OCTOBER 1, 1910.

No. 1

---

## *Another Term Begins.*

Ever since colleges began to teach and ever since convocations became the rule, students have received only kind words and good advice from faculties. Undoubtedly these encouraging words have done much to prepare young men and young women for the serious problems and duties of life. The chief hope in these late years, on the part of college presidents and other speakers, has been to say something that should point the way for students, show them that they are approaching that stage in life when each must start for himself, and yet so to brighten their timely council that the student's sustained interest may be held.

In the convocation, Thursday morning, September 22, President Waters greeted the student body as a friend, setting aside the supposed barrier between the students and the head of the college, and inviting all of them to come to him not only when advice and help were needed, but to become acquainted. President Waters emphasized this point: that no man or woman ever fully succeeded in life who traveled alone or unadvised by others. Friendly council from those competent to give it, he said, was far more valuable and important than any one supposed.

Dr. C. M. Brink, dean of the college, read the story of the Prodigal son, using the text as the basis for the general application that the absent sons and daughters from the homes throughout the State should profitably employ their time and lay now the foundation for the coming years of usefulness.

Dr. J. T. Willard, dean of science, spoke on "Preparedness." This word, Doctor Willard believed, came into general use through Theodore Roosevelt's efforts. It was, he said, a strong and important word, worthy the careful consideration of every student in the land.

Mrs. Mary VanZile, dean of women, spoke entertainingly and cheerfully of the environment that will give physical and spiritual development to young people. The students were cautioned by Mrs. VanZile to be careful about forming friendships in their col-

lege years; to go slowly and not to err in the first freedom from home restraint.

Following Mrs. VanZile, Doctor Brink spoke of the importance of getting a right start. A coach, he said, always gave particular attention to the working out of his men. It was Samuel Johnson, Doctor Brink said, who once declared that it did not matter whether a man went east or west, he was almost certain to arrive at the same place sooner or later. "But," said Doctor Brink, "I imagine it would be a long trip to reach the Domestic Science building on the west if one should start east. There would be oceans to cross and lands to traverse."

E. H. Webster, dean of agriculture, urged the students to remember the folks at home who were facing empty chairs that morning, possibly after much self-denial in order that they, the students, might come to College. E. B. McCormick, dean of mechanic arts, being absent from Manhattan, that division was represented by Prof. B. F. Eyer. The durable satisfactions of life, Professor Eyer said, come not so much in doing things as in how you do them and how much you enjoy the doing. The people expect the students to leave the Kansas State Agricultural College able to do things, and therefore it was proper and necessary that they should face their studies cheerfully and find in them the joy of doing and the satisfaction of doing them right.

Before calling upon Dr. Samuel Garvin, of Kansas City, Kan., the principal speaker of the morning, President Waters asked for the college yell, and it was given with a vigor and enthusiasm somewhat startling to visitors and certainly encouraging to the Faculty.

Doctor Garvin's address was that sort in which young people find especial entertainment and instruction. Along with the sound philosophy of it, drawn from a well-stored mind, were many stories, interesting and humorous and particularly apt.

"We do not so much need to concern ourselves about the laws," said Doctor Garvin, "as with the men who administer the laws. The chief factor of every institution in this country is the personnel of its leadership. We do not live under a government of laws, we live under a government of men and newspapers. Nowhere to-day is there such an ebullition of thought as in Kansas, and this year that thought is exceedingly progressive, particularly in politics."

Away back yonder, Doctor Garvin said, perhaps before he was born, God put into every man a commission to do something, and the sooner a man found this commission and set to work, the better for himself and the world. Every man and every woman must



choose for himself and herself the path to be followed through life. Two sorts of persons he always considered candidates for the asylum for the insane: the man that chooses an occupation for his son and the mother that chooses a husband for her daughter. It did not matter, he said, whether a man be a "pill peddler or a pulpit pounder," he should work with all his might for the best there was in him.

Doctor Garvin was not sure that he favored special occupations for young women. He had read a story in the Bible of certain wise young women and certain foolish young women, all of whom were engaged in the commendable occupation of waiting for the coming of the bridegroom. He was strongly in favor of the domestic science course, he said, and—pointing to the Domestic Science and Art building—he believed the quickest road to domestic happiness ran through that structure.

Doctor Garvin was frequently applauded throughout his address of forty-five minutes.

---

### ***The New Course in Industrial Journalism.***

It may not be known generally that more papers are printed to-day in the interests of agriculture and its allied branches than any other profession. More than two thousand persons in the United States are employed in preparing these publications for the press. This means that in this branch of human endeavor there is a wealth of opportunity. There are not enough books in the libraries, presses do not print enough papers to tell the world all it is eager to learn of farming and other great interests upon which the public depends for its sustenance. The college can not make enough agricultural or industrial experts to keep this curious world informed; the farming papers are eager for contributions, for intelligently written articles, for letters from men from farm and shop which shall tell their readers what the world desires to know, and, in the telling, emphasize the dignity of labor and the possibility of combining work of the head and hands in one profession.

In opening, this term, a Department of Industrial Journalism, the Kansas State Agricultural College hopes to do important service in supplying this increasing demand for information. Primarily it is the intention to teach students to write English acceptable to industrial publications, and to write entertainingly of subjects that, ordinarily, are prosaic only because of heavy treatment; subjects that, with common regard for brevity and brightness, may be filled with human interest of surpassing attractiveness.

The demand for this kind of reading is growing daily. The difficulty of supplying it was emphasized by every one of thirty editors of farm and trade papers in Chicago who were visited this month by Prof. Charles Dillon, who is to have charge of the new department. The announcement that the Kansas State Agricultural College was to do something toward ameliorating these conditions was received with much satisfaction. The editors of two leading publications were so interested that they at once expressed



Charles Dillon.

their intention of offering attractive awards for contributions from Kansas students, and requested to be kept informed of the new school's progress.

This does not mean that the Kansas State Agricultural College expects or desires to make editors offhand. It hopes to send young men and young women back to the farms and towns and small cities where they are so imperatively needed. It desires nothing more satisfying than to return its students to the land mentally equipped to tell what the land, scientifically managed, will produce. This is its chief object, but it also hopes to educate these students to conduct "country papers." This designation is used only to distinguish the rural press from that of the cities or metropolitan papers. The influence of both, when properly di-



rected, is powerful; no man or woman can participate in a business more honorable or more certain in its rewards. On it rests the mighty duty of conveying to the world the news of what the world is doing, of disseminating popular information, and of improving, by apt suggestion, the whole system of living in the town and country by making people think. Without the newspapers, the farm and trade publications, the value of the colleges would be greatly lessened, and communication between communities would be reduced to a minimum.

The course in journalism, provided by the foresight of President Waters and the Board of Regents, opens to the young men of Kansas a field of exceptional usefulness. To those who demonstrate their fitness, the opportunities are many and attractive, but it is a calling in which only the live, industrious and ambitious will win.

The course in journalism is elective in the junior and senior years, and can be taken with other courses. Coöperating particularly with the Departments of Printing, English and Agricultural Extension, the School of Industrial Journalism presents an educational combination of much importance in the college curriculum.

This department of writing has been largely neglected by the young women of the State. The girl or woman that can write interestingly, especially of domestic science and art, will not long be idle should employment be desired. But even if she write only from her own home, her work will be equal in importance, and in some respects surpass, that done by women in almost any other branch of human activity. The woman that writes to improve home living is doing a fine thing for humanity—something as fine and important as that done by the man who increases the yield of an acre or improves a breed of cattle or horses. One means a race of better men, and better homes. The other means more homes and better comforts in them.

It had been hoped to enlarge the INDUSTRIALIST with the opening of the present term, but this change, it has been decided, will be delayed for a few weeks.

---

H. M. Cottrell, '84, commissioner of agriculture for the Chicago, Rock Island & Pacific railroad, spent a few days in Manhattan last week. He was on a trip through thirteen states arranging his work with the several boards of agriculture and experiment stations. He travels in his private car. While here he entertained for supper in his car Mrs. E. H. Bowen, Mrs. Phoebe H. McKeen, and Watson D. Haines.

***Driving Out the Chinch-bugs.***

Can the farmers of Kansas, by following the advice of experts, rid the state of chinch-bugs? T. J. Headlee, professor of entomology at the Kansas State Agricultural College, who knows as much or more than any one else of these pests and their history, says the farmers can do it. Contrary to the accepted idea of the general public, the chinch-bugs are said to have done more damage this year to corn than to wheat. This is because the small brood appears first in the spring wheat and later in the summer changes its habitation and activities to the adjoining corn fields. No one knows exactly what damage has been done to the corn and wheat, but it is accepted as a fact among those who have studied the situation carefully, that the corn received the brunt of the attack.

In the last two summers the chinch-bugs have done large damage to corn throughout the central part of the state from north to south, especially that part devoted to wheat and corn. This, investigation shows, is because growing the two grains together is conducive to every condition suitable to the growth of the chinch-bug. The damage became progressively heavier in both years, 1909 and 1910, as the investigation proceeded from north to south, most damage being in the central counties. A condition that caused much damage to corn in the central part of the state this year was due to listing many wheat fields to corn. This listing became necessary when wheat failed and corn took its place.

The Kansas State Agricultural College through its Department of Entomology, has done about everything that a college could do in helping to drive out the chinch-bugs, Hessian fly and other insects. Professor Headlee and his assistants have given clear and concise lectures and directions to the farmers; press bulletins and pamphlets have been issued at the expense of the state, describing methods of destroying these insects, such directions applying to winter and summer treatment. One or two men have been kept in the field always in the worst parts of the infested districts. This was done from before harvest last year to the present. The man so assigned traveled almost continually from one part to the other of the section where his services were needed. For instance, this agent spent several months last winter working against chinch-bugs on farms in Sumner county; and, during the passing of the bugs from the wheat fields to the adjoining corn fields this summer, experimenting and demonstrating chiefly in Harper county.

It is planned to take a large farm in one township and a second



area of several square miles in a badly infested district, and by every practicable means known try to prevent these areas from suffering next season from the chinch-bug and to discover if, from measures now known and to be devised, the farmers by working together can prevent chinch-bug damage to crops.

Professor Headlee intends to kill chinch-bugs this winter by burning them in their winter quarters. Those that the fire does not destroy will, he believes, die by exposure to the weather. By this method it is believed that the passing of the chinch-bug from one field to the other will be prevented.

There are experts who insist that common action by the farmers for cleanliness in fields and buildings and along the roadways and the prompt burning of wheat straw and corn stalks, unless used by the farmers for other purposes, would in a short time completely eradicate the chinch-bug. One dirty farm, it is said, can infest an entire county, and that means the state.

At Hays, where the state has 3500 acres, burning will begin next month in the area attacked by the chinch-bug.

---

### *Why a Soil Survey?*

Why should a farmer spend the best years of his life trying to cultivate soil on which nothing can be produced?

Why not know in the beginning whether the soil is best adapted to wheat or corn or brick making?

What do the farmers know of soil surveys? How many farmers know what is in the soil of their farms, what it will grow and why it fails to grow, when it does fail? Farmers have been known to drag along for years on unproductive soils, needing only one addition that might have been provided by the agency of a soil survey.

The material wealth of a country is thought of in terms of gold, silver and copper. Much is heard of our wonderful mining industries.

But more wealth was taken from the soil last year than has been taken from the gold mines of North America since it was discovered by Columbus.

The plant-food in the soil is the farmer's gold. His future depends upon how he mines it. And well-mined soil will continue indefinitely. If wastefully operated, it soon will be exhausted.

Geographical surveys are common. Water surveys are understood by most persons; doubtless for years the farmers have known of soil surveys but only recently has much consideration been given them by those to whom they are of utmost importance.

The soil survey is the means for the farmer to take stock; it is his chief asset. By its work he knows how long his soil will last; if he can turn it over to his children for their benefit or whether it will soon wear out. The survey will show him, also, how so to farm it that he may conserve its valuable materials, and how to fertilize it to supplement the stock of plant-food it contains. Nothing can be more important than this.

The time to know what is in the soil is in the beginning, not when a man is too poor to avail himself of the new knowledge. A farmer can do little to benefit himself when repeated crop failures have loaded his farm with mortgages. The way to get large crops, the way properly to rotate these crops, the whole mystery, in other words, of soil fertility is wrapped up in soil survey. Hardly any other work done by the Kansas State Agricultural College is more important to the farmers of the state. Every farmer who meets an expert from the college—and they are constantly in the field—should welcome him as an agent of good. This agent visits the leading farmers in certain districts and from them learns in outline the local conditions.

For instance, in the western part of a county the farms show a light sandy soil; in the eastern part is a gumbo; up there in the north it is black, and down here in the south is a gravel formation. The agent visits the county surveyor. The plat books are examined. Every one in the county likely to have information of value is questioned. As he goes along the road, the agent watches the soil and the crops, the houses and the barns. He has a four-inch auger and, where the circumstances warrant it, makes at least five or six borings in the farmers' fields. The first goes down about seven inches, the second from seven to twenty inches, and the third from twenty to forty inches. These samples are put in sacks, numbered and the number recorded with the agent's notes describing the soil, its texture, color and other peculiarities; notes of agricultural conditions in general, the methods of farming, etc., the whole forming a record of inestimable value to the citizens of the state, now and in the future.

While the summer journeys through the country are very interesting, it is the work done in the laboratories of the Kansas State Agricultural College that stands out as of extra importance. Every sample of the soil taken is analyzed by a competent person, to whom every particle means something. The totals of potassium, phosphorus, nitrogen, carbon and carbonates, and acidity are entered in the books. These show the potential fertility of the soil, and are, in fact, the evidence for which the survey was made.



It is important to know what a soil will grow and why it will not grow certain crops. Furthermore, the tests and experiments are of especial value as exhibits for the college classes, because there a boy may see soil from his own home county or his father's farm, the farm he, some day, may own and operate. It is, certainly, of interest to him to know what that soil contains and what it will grow. His studies in college and all that he does after leaving college are very likely to be determined by the analysis of the soil taken from his own neighborhood.

Prof. Swanson, of the department of chemistry, and his aides, have carried on soil surveys in these counties: Labette, Cherokee, Allen, Sedgwick, Jefferson, Russell, Brown, Doniphan, Riley, Greenwood, Harper, and Ellis. The United States Bureau of Soils already had surveyed Labette, Allen, Brown, Riley, Sedgwick and Russell Counties when the college began its investigations.

In Riley County, for instance, there are eight soils, two of residual origin, five alluvial and one of water-deposited material, a formation called "loess." The most important residual soil, Oswego silt loam, is found on the high plateau or prairie, at an elevation of 1,250 to 1,400 feet. The soil is derived by weathering, principally from the underlying shales. The loessial soil, Marshall silt loam, is derived from the material formed by the deposition of transported soil from the deflected waters of the glacier, and is found not more than 1200 feet above the sea level, in the lower slopes of the valleys and on the low, rolling uplands. It probably constitutes the greater part of the creek bottoms and has been thinly covered with recent alluvial wash from the surrounding hills.

Oswego silt loam consists of a rather heavy silt loam varying in color from dark brown, under ordinary moisture conditions, to black when wet. This soil is remarkably uniform in color and texture and is entirely free from stones, except on some of the narrower slopes at the edge of the valleys where it joins the Rough stony land. The Laurel fine sandy loam is a type of soil that has very little uniformity in texture. It consists of quantities of sand and silt that have been washed together by floods and mixed in varying proportions. The type is in the bottoms of the Kansas, Big Blue and Republican Rivers. The largest areas are in the Kansas River bottoms near Manhattan. Smaller areas of the type are found in the Big Blue River bottoms, usually inside of the larger bends.

The Laurel fine sandy loam lies in a nearly level position. Areas

that have been washed by the overflow waters and blown about by the wind give the type an uneven and irregular surface in places. Surface drainage is fairly good, and the loose texture of the soil and subsoil allows a ready downward percolation of water, so that the type does not require artificial drainage.

The Laurel fine sandy loam is an alluvial soil that owes its origin to the deposition of transported sand and silt from rather freely flowing water. The process is continued during the infrequent floods which occur in these rivers. The last flood, in 1903, formed considerable of this soil by depositing the sandy material on what was at that time Laurel silt loam. These sandy deposits were made to a depth of from a few inches to several feet and little uniformity is to be found in the soil section.

The greater part of the soil is cultivated, but where uncultivated there is a natural forest growth of cottonwood, elm, walnut, etc. The lighter phase is especially adapted to melons, sweet potatoes and other vine crops. The heavier phase, especially where the subsoil is a black or brown silt, is especially adapted to corn and Irish potatoes. The type as a whole is a good truck soil.

The crops grown at present are corn, alfalfa, potatoes, melons and vegetables, together with smaller quantities of wheat, oats, Kafir-corn, and sorghum. In the vicinity of Manhattan considerable trucking is done. The crops grown for local market and for shipment consist of sweet potatoes, melons, Irish potatoes, and smaller quantities of other vegetables.

Corn yields at the rate of 25 to 50 bushels, alfalfa from  $2\frac{1}{2}$  to 4 tons, wheat from 15 to 20 bushels, oats from 25 to 40 bushels, Irish potatoes from 75 to 150 bushels, and sweet potatoes from 75 to 200 bushels an acre. Apples, pears, peaches, plums, cherries, grapes and berries do well on this soil. Melons and cantaloups also do well and are grown to a considerable extent.

This land is a good truck soil, but needs plenty of rain for the best results, as it dries out quickly. It is not naturally a very strong soil, and for general farming it soon deteriorates if not cultivated carefully. No fertilizer and little manure of any kind is used. This type is not a favorite with the farmer who wishes to grow grain, but in the vicinity of railroads and towns, where it is used for trucking, it is valued quite highly, being held at from \$50 to \$75 an acre.

Soil surveys give all this information. Such work determines just what soil may be expected to produce and how it should be treated if lacking in needed properties. It is one of the big and important works of the Agricultural College.



### Local Notes.

Miss Talmage Solt, a former student, is assisting in Varney's bookstore this week.

Chas. M. Vernon, editor of the *Manhattan Daily Mercury*, was a college visitor Wednesday.

W. S. Gearhart, highway engineer, extension department, K. S. A. C., left Tuesday for Pueblo to attend the Irrigation Congress.

Henry W. McFadden, of Halls Summit, Kansas, arrived Tuesday to resume his college work. He is rooming at the Y. M. C. A. building.

Miss Matah Schaeffer returned Sunday from Atchison, Kansas, where she has been teaching domestic science in the State Orphans' Home, for another year of work in the domestic science department.

Prof. Dean left Wednesday on a trip through the eastern states. He will study the grain shipping methods in Chicago, Buffalo, New York, Philadelphia and other eastern cities. He will return in about three weeks.

J. D. Rickman, superintendent of the printing plant, has been invited to address the State Press Association in February. Mr. Rickman will speak of "Industrial Education," with particular reference to the practical side of printing.

E. H. Webster, dean of agriculture, and Wm. Jardine, professor of agronomy, have gone to Pueblo, Col., to attend the Irrigation Congress. They are to go, at the close of the congress, to Spokane, Wash., for the Dry Farming Congress.

A gold pin found in Maxine Elliott's theater, New York, has been sent to the college by the manager, George J. Appleton. The pin is in the office of the department of industrial journalism. It will be returned to the owner upon proper identification.

Those that remember the early graduates of K. S. A. C. will call to mind the members of the class of 1871, of whom only five can now be accounted for. Two of this number were Charles O. Whedon and Ellen F. Denison, the daughter of President Denison. Later these two were married and for thirty-five years have lived in Lincoln, Neb. Friends in Manhattan received word last summer that Mrs. Whedon had died in New York where she had gone for medical treatment. Mrs. Whedon had many friends in Manhattan.

The Agricultural College began last May an investigation of the so-called semi-arid regions of western Kansas, the purpose being to learn the actual conditions under which farmers were cultivating their farms when too far from rivers or creeks to obtain water for irrigation. This investigation resulted in encouraging the use of pumping plants operated by gasoline and gas engines. Where the farmers do not understand the operating of these engines, the Agricultural College sends experts to help them, who direct the installing of the pumping plants and teach the farmers how to care for them.

*Alumni and Former Students.*

Elizabeth (Finlayson) Zuck, '04, spent a few hours in Manhattan recently.

Born, September 28, to Mr. and Mrs. T. W. Buell, both of the '04 class, a son.

Fred G. Kimball, '87, and Miss Mary Marlatt were married September 24. They will live in Manhattan.

J. M. Westgate, '02, an alfalfa specialist with the U. S. Department of Agriculture, was a campus visitor Wednesday.

The domestic art department is so busy this fall that Jennie (Ridenour) Orr, '04, is assisting in the work of teaching classes.

Miss Virginia Meade, '09, took advanced work in domestic science this summer at Columbia University. She will teach in the Topeka high school this term.

Miss Elizabeth Dickens received, this week, a large box of California grapes, the annual gift of Isaac Jones, '94, Etiwanda, Cal. Mr. Jones is now studying law at San Bernardino, Cal.

D. E. Lewis, '10, left for Parker Wednesday to finish the college fruit demonstration work there and at other points. He will return in about four weeks and enter college and take postgraduate work along horticultural lines.

Married, June 30, at Summerfield, Kan., Stella May Finlayson, '07, for last two years a teacher in the grades schools of Tulsa, Ok., and Geo. C. Gardner, a student in 1903-'04, now a civil engineer employed by the Puget Sound Mill and Lumber Company, of Port Crescent, Wash.

Harry M. Bainer, of the "naughty-naught" class, has resigned as professor of farm mechanics and dairying in the Colorado Agricultural College to take a position with the Atchison, Topeka & Santa Fé railway as agricultural demonstrator. His headquarters is at Amarillo, Texas.

Edward A. Morgan, K. S. A. C. '07, has been appointed "expert farmer" in the Indian service at Vinita, Okla. This is a civil service position requiring an examination in which the competition is keen. Only graduates of agricultural colleges can pass, because of the knowledge required.

Miss Margaret Haggart, '05, will be an instructor in dietetics in the hospital department of Johns Hopkins University this year. She has been a teacher in the domestic science department of the New Mexico Agricultural College for the four years since her graduation in the K. S. A. C.

Mrs. Henrietta Calvin, '86, at the head of the domestic science department of Purdue University, who formerly held a similar position at K. S. A. C., has started the first short course of domestic science held in Indiana. The course founded by Mrs. Calvin is similar to that offered at this college.



THE  
**INDUSTRIALIST**

Vol. 37

Saturday, October 8, 1910

No. 2

*Issued Weekly By*  
**Kansas State Agricultural College**  
*Manhattan, Kansas*

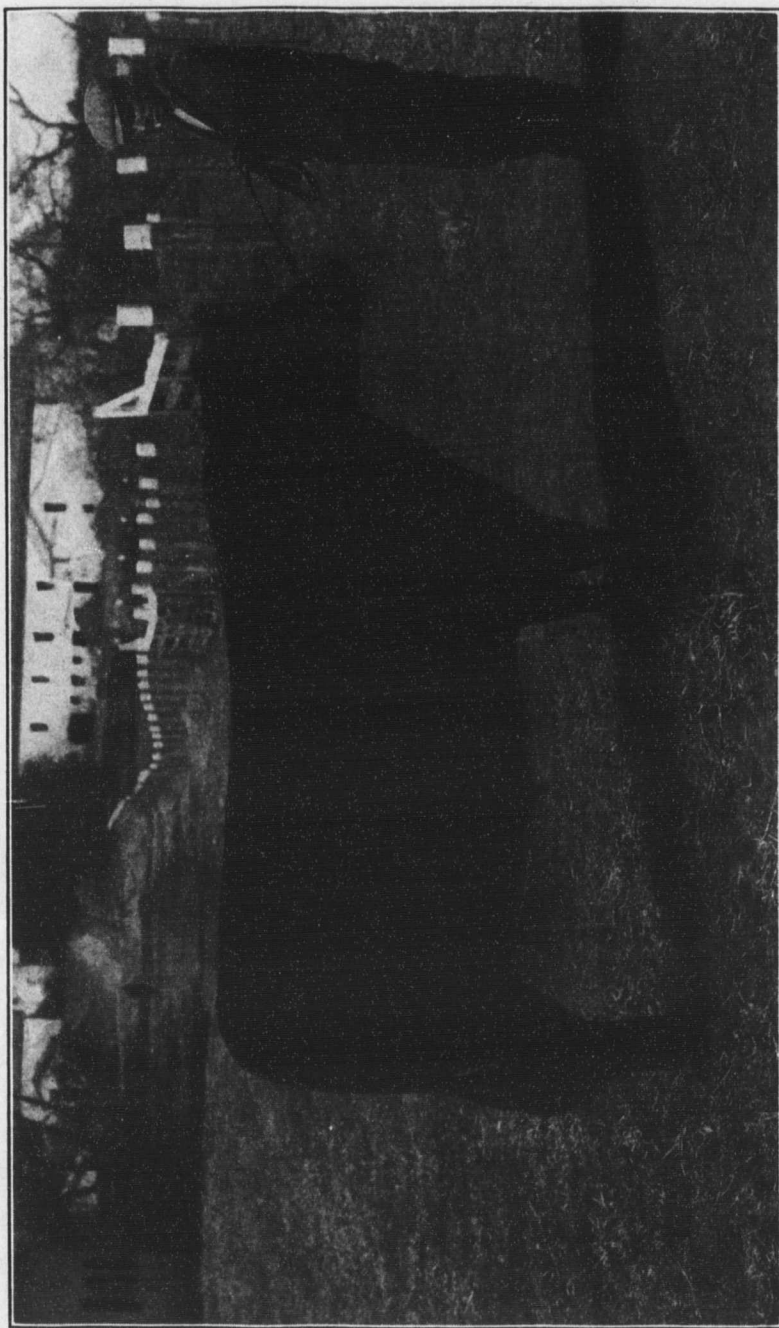


**STAFF**

Pres. H. J. Waters, Editor-in-Chief  
Prof. C. J. Dillon, Managing Editor  
Dr. J. D. Walters, Local Editor  
Dr. J. T. Willard, Alumni Editor

~~~~~  
Published by
PRINTING DEPARTMENT
J. D. Rickman, Supt.

Entered at post-office, Manhattan, Kan., as second-class matter. Act of July 16, 1894.



Symboleer, K. S. A. C., Angus steer, winner of the championship in the Interstate Fat Stock Show at St. Joseph.

THE INDUSTRIALIST

VOL. 37.

MANHATTAN, KAN., OCTOBER 8, 1910.

No. 2

Why the Rural Decrease?

The startling decrease in the rural population of Missouri, Michigan, Iowa and the other agricultural states is due, primarily, to these conditions, in the opinion of Henry J. Waters, president of the Kansas State Agricultural College:

America is drifting toward the stupendous blunder of Great Britain in creating a land-owning class to be supported by tenants.

Unless checked—and President Waters suggests a remedy—this will retard the improving of rural conditions, in which is included better homes, better schools, and a more comprehensive system of rural education; prevent road building and seriously discourage the scientific cultivation of restricted areas from which would come increased yields.

The cost of living must be reduced by improved methods of production rather than by reduced profits to the producer.

“The decrease in rural population in the states referred to,” President Waters said, “is due, mainly, to emigration to Oklahoma, Texas, Canada, etc., and to the fact that so many farmers of the states affected have moved to town to enjoy the better social, educational and religious advantages than are afforded in the country.

“To those that have kept in close touch with the agricultural situation this decrease in rural population is not surprising. We have seen our agricultural exports decline rapidly within the last five years, and the price of food stuffs rise steadily, despite good crop yields, the country over. Months ago it was pointed out that this could be due to no other cause than that too few people were on farms, and too large a proportion of our total population was in cities and towns.

“Of course, this condition of affairs is temporary, and will soon correct itself. It is exceedingly important, however, that we give careful attention to the fundamental causes for this exodus from

the farm to the city, and employ the proper means for correcting it at this time and for preventing its recurrence in future.

THE CONSUMER'S INTEREST.

"It does not so vitally concern the agricultural population as it concerns the consuming public in general, for so long as there is a shortage of producers and a surplus of consumers prices are bound to be satisfactory to the producer and unsatisfactory to the consumer.

"Agricultural practices must be improved so the farmer may derive a reasonable profit at the same time that he sells his products to the consumer at prices that he can afford to pay. The cost of living must be reduced by improved methods of production, rather than by reduced profits to the producer.

"On the surface, the reason for so many people leaving the farm in Missouri, Iowa, etc., is that land has risen in price rapidly in the corn belt within the last five years. This has forced the man of small capital who wanted to buy a rural home to leave this region and go into Oklahoma, Texas, Western Kansas, or Canada, where land values were lower.

"The man that owned the land suddenly found his property valuable beyond his dreams, and was immediately tempted to cash in, so to speak. He well knew that at the prices for farm products to which he had been accustomed, and under the system of farming with which he was familiar, his land would not yield a reasonable return upon the money for which he could sell it. In other instances there was awakened in the owner a desire to exchange his limited acres of high-priced land for a larger holding of cheap land in the west or south, in the hope of reaping a benefit of a rapid and decisive rise in its value such as had occurred in his smaller holding. In many instances the farmer had, in the era of good crops and satisfactory prices, accumulated a surplus fund with which he bought out his neighboring farmer and thus doubled his land holdings, his neighbor moving to town or to some other state, his house in many cases remaining vacant.

HIS DAY OF WEALTH.

"In a still larger number of cases the farmer found himself suddenly wealthy enough, under the new regime of land values, to live in comfort in the county-seat town or in the city, and give to his family advantages which the country had not afforded. Many young men hesitated to engage in farming with land selling at \$100 an acre who, with land worth \$25 an acre, would have chosen agriculture as a business. In short, the high price of land, the fear

that it might decrease in value, and the conviction that it would not further increase in value, has forced many young men into other professions who would otherwise have become farmers. Much of our best agricultural land has passed into the hands of capitalists and city and town business men. On farms where formerly lived the owner, now lives a tenant.

"The real reason, however, for this exodus from the farm must be sought in the condition of rural life itself. If the people generally believed that country life possessed the business opportunities and attractiveness of town and city life, there would be plenty of people to take the place of those who left the country for the other states or for the town. If the schools, churches, roads, social and home conveniences had reached the same development in the country as in the city, there would not be complaint of lack of sufficient people on the farm.

"Added to this situation is the extremely unfortunate fact that the difference between city and country life in these respects is greatly exaggerated in the public mind. The people of the country largely over-estimate the advantages of city life, and fail correctly to comprehend its disadvantages until it is too late to change their condition, while the people of the city enormously exaggerate the difficulties and drudgery of country life, and fail to appreciate its great and peculiar advantages.

"This trend cityward is to a great degree due to the half education that has prevailed in the rural districts, giving farm boys and girls glimpses of a more attractive city life, without teaching them at the same time how they may attain such a life at home."

HERE'S THE REMEDY.

The important thing to be decided, President Waters concludes, is this: How to keep young men and young women on the farms so that the average intelligence of the farming community may not be lowered. The remedy, he believes, will be to improve the rural school, erect within riding distance of the home of every boy and girl in the rural districts a first-class high school in which agriculture, manual training and home economics are taught, the rural church must be strengthened, developed and redirected, and the country road must be made passable in comfort the year through.

"We do not need additional emigration to this country of the class we have been getting in the past," President Waters said. "We do need emigrants of the sort that we may profitably put on our farms. This means they must be intelligent, well educated, have

capital, and the sort of experience that will keep them in sympathy with country life and enable them quickly to adopt the American viewpoint and the American methods. It should be kept in mind that the foreigner is Americanized more slowly in the country than in the city, and the wrong sort is a far greater menace to society when in the open country than in the closely guarded city.

"To attract such emigrants would mean to establish offices in different parts of the country, to induce the right sort of people to come here and actively to discourage the wrong sort from emigrating to America. Care would, of course, need to be exercised in directing these people to that part of the country where they would be most likely to succeed. For example, a different farmer should be selected for the Ozark region of Missouri from that of the short-grass country of Kansas. The several states and the federal government might profitably coöperate in this important enterprise. Emigrants should be selected on the continent of Europe rather than in Castle Garden, New York."

The New Dairy Head.

"Pailing a cow" is disagreeable work and the Kansas farmer doesn't like it. And more than that, he would resent any such attempt to dignify milking by calling it "pailing." He hates to slide out of a warm bed at about four o'clock in the morning, as most dairymen must, and begin milking. It is decidedly unpleasant, he thinks, happening as it does seven mornings out of every week, and evenings too.

Probably because the farmer does not like this chore, which at all dairies is no small one, dairying in Kansas is not nearly as big an industry as it should be. O. E. Reed, who is in charge of the department of dairying at the Kansas State Agricultural College, believes this is one of the chief reasons but doesn't desire to be understood as saying Kansas farmers are lazy. Indeed, he believes the exact opposite.

Mr. Reed arrived at the College ten days ago. Already he has planned and begun to carry out some things that should make his department useful to dairy interests in the state, and he believes that is what his department is for. He is a graduate of the Missouri school of agriculture. For the last three years he has been associate professor of dairying at Purdue University in Indiana. He is the kind that "does things." At Purdue they tell this story about him: Arriving at Purdue to take up his work he found that

his department had only one silo full of silage—about half enough for the herd. He asked a few questions and learned that the department had money enough to build another silo but that it was thought by his associates too late in the season to build it. The material with which to fill another silo would be gone by the time the silo was completed, they thought. Reed had another idea. He knew the silage would be needed badly, so he telegraphed for



O. E. Reed,
Assistant Professor of Dairying.

the materials, pushed the construction work and filled the silo as it went up. They had enough silage to last through the winter.

"Yes," he said yesterday. "I should say that if any one thing causes lack of interest in dairying it is the general dislike of having to milk. I hardly think the milking machine will solve the problem. We have tried the milking-machine here and although it might be practicable for a large herd it is not practicable for a small one. And then with the milking machine you cannot get the personal contact with the cow, and that counts for a good deal.

"But there is a remedy, I believe. The people that use butter and milk and cheese will have to pay the dairyman extra for his trouble. The big prices now paid for dairy products should be the remedy. Why, the price of whole milk in Chicago has increased 65 per cent in the last few years. Topeka people are complaining of a 70 per cent increase in whole milk. At the Elgin market, the central market for the Middle West, the price of butter

fat has increased 58 per cent in the same time. Thus, while other food stuffs are increasing from 40 to 50 per cent, dairy products have increased 60 to 70 per cent. That ought to sound good to the dairymen. With such increased prices it is only a matter of time until more farmers will be attracted to dairy farming.

"The ever-increasing cost of land also will help dairying in Kansas. It is not so easy to make beef as it used to be. A dairy cow will, in a year, make more food for humans than a beef cow in the same time and for practically the same amount put in. And then at the end of the year the dairyman still has the machine that did the work.

"The dairy industry is coming west. Kansas is in better condition for the industry than it ever has been. The state has the alfalfa and corn necessary for silage. And the markets are better and closer. Kansas City and St. Joseph on the east, and Pueblo on the west, are all good markets for Kansas dairymen."

The department at the Kansas State Agricultural College desires to build up a first-class dairy herd. To do this it has started an experiment to learn exactly how the dairy cow uses her food and what her nutritive requirements are from birth to maturity. The college now has a herd of about forty cows representing four breeds—Holstein, Jersey, Guernsey, and Ayrshire. By careful breeding and culling it is believed the college will have, within a few years, one of the best dairy herds in the Middle West. The dairy barn has stalls for seventy cows.

As was done last year the department will conduct this year bi-monthly butter-scoring contests at the college, in which all creamery butter makers of the state are eligible to enter. Prizes are offered for the best samples of butter and for the best judges. The contest is in charge of a competent judge, who explains why some samples are better than others, and in other ways gives general information about butter making. The creamery men feel the need of these contests and like to take part in them. An improving of the quality of creamery butter is the result of these contests.

Francis B. Milliken has been elected assistant in entomology in the college and station work, to take the place of Harry Evans, recently resigned. Mr. Milliken was graduated from this institution in 1908, and up to his election has been doing graduate work in the entomology department here. In addition to the regular training he has spent two summers in state work, the first in work against the San José scale, and the second in fumigating flouring mills.

Organized Help for Students. — The Y. M. C. A. and the Y. W. C. A. Give the Proper Tone to College Life.

The opening of college means turmoil, excitement and work for the college town. The new student must not only be enrolled and assigned to classes; he must also be made welcome and be assisted in finding a room and a boarding club. He must be made to feel at home. This is where the Young Men's and Young Women's Christian Associations enter upon the scene of action.

The two associations at Manhattan, the home of the Kansas State Agricultural College, have been especially busy this year. Every train for a week before the beginning of the college year, and for two days afterward, was met by delegations from both associations. These committees acted as guides, information bureaus, confidential advisers, and even as porters and expressmen in exceptional cases.

The influence for good of the Y. W. C. A. and Y. M. C. A. in the college can hardly be overestimated. The college curriculum is strong on mind development, but does nothing for the student's spiritual nature, nothing, in the case of the majority, for his physical well-being. It is the function of the Y. M. C. A. to provide certain educational advantages not found in the college courses. One of the strongest features of its work, in addition to looking after the spiritual needs of the students, is the training in leadership. The colleges not only have to furnish the trained minds for the country, but must also send out men trained to lead in all movements for the betterment of social and economic conditions in American life. For this purpose the Y. M. C. A. Bible study course for this year offers to upper classmen two especially strong courses in laymen leadership, one of these teaching leadership in agricultural communities.

The two associations are looking forward to a successful year. The Y. W. C. A. has assisted over one hundred girls in getting rooms for the year; has found employment for forty girls who are working their way through college; and expects materially to increase its membership of four hundred and fifty. The association maintains an office for the secretary, Miss Flora Hull, and a rest room for girls in the domestic science building. Miss Gladys Seaton, '11, is president of the association.

The Y. M. C. A. has helped five hundred students to find rooms; obtained employment for one hundred; started enrolment in ten gymnasium classes under the competent instruction of O. C. Thompson; held a two-days Bible study institute, led by Dr. Clayton S. Cooper, of New York, assisted by eight members of

the college Faculty, and has set the membership goal at one thousand.

E. T. Heald, an Oberlin College man, is general secretary, with offices in the Y. M. C. A. building at Eleventh and Fremont streets. M. S. Collins, '12, is president of the association. C. J. S.

How the Co-op. Bookstore Grows.

The growth of the Students' Coöperative Bookstore was described in student assembly a few days ago. In 1900 the store was inventoried at \$300. The business for the year was \$3,000. In 1909 the stock in the store was worth \$5,000, and the business amounted to \$17,000.

Carl Mercer, manager of the store, drew attention to the fact that the students might save from 10 per cent to 45 per cent on the cost of books by buying them at the coöperative store. Students also may obtain work through the employment agency in connection with the store. The students were invited to call there and become acquainted and make the store their general headquarters during their leisure moments.

Listen to the Band.

Are you ready for the band? Judging from the present, the band will be busy this year. Though primarily connected with the Military Department the band always is ready to contribute to student enterprises. One concert is given every year, at Commencement time, and always is a success.

The band practices three times a week and plays, Thursday, for dress parade. All beginners have a tryout and the best men are chosen for the places, as in football.

Eighteen new men have reported for band practice. With many of last year's members back, G. A. Westphalinger, the leader, believes the organization will be much improved.

"We expect to have a much better band this year," Mr. Westphalinger said. "We shall take up a higher class of music, too. As several members of last year's band have reported and a large number of new members are enrolling, we ought to have an excellent band and do more for the school and the student body."

The following applicants have enrolled for practice: *Clarinets*—O. M. Franklin, Ray Williams, W. L. Rhoades, D. G. Parkinson, C. A. Macintosh, H. E. Butcher, C. A. Hutto; *Piccolo*—C. Sumner; *Cornets*—Roy Fritz, C. A. Davis, N. B. Needham, C. C. Walcott,

R. K. Bonnet, J. G. Blunt, H. E. Newhouse, F. B. Ira, B. R. Ellis, Otto Parker, R. L. Barnum, Ray Whitney; *Altos*—Leo Rexroad, H. McNamara, J. W. Bolinger, A. W. Griffith; *Trombones*—E. H. Smies, O. F. McKittrick, C. C. Straub; *Baritones*—W. G. Davis, F. L. Robinson; *Basses*—W. A. Brown, G. H. Peterson; *Drums*—L. Flanders, Burton Williams, G. T. Gillespie.

Mr. Westphalinger has had 32 years experience as a musician. This is his second year at K. S. A. C.

Prof. Emch to the U of I.

Prof. Emch, at one time a member of the faculty of this college, later professor of mathematics at the State University of Colorado, and for the last year or two professor of mathematics at the University of Basel, Switzerland, has accepted a call from the State University of Illinois. Dr. Emch is the author of several modern works on higher mathematics. He is a son-in-law of Dr. Walters of this college.

At the Fairs.

The Kansas State Agricultural College was well represented at the state fair at Hutchinson. R. J. Kinzer, professor of animal husbandry, with T. G. Patterson and T. H. R. Wright, assistants, were there for the stock judging. Mrs. Mary P. Van Zile, dean of women, judged the jellies, jams, cakes, and pies. Miss Antonetta Becker and Miss Gertrude Stump judged the household art display. Albert Dickens, professor of horticulture, awarded the prizes in the horticultural division.

H. A. Pennington, '99, was assistant superintendent of cattle at the fair. A. H. Leidigh, '02, had an excellent exhibit of Hereford cattle, and F. A. Dawley, '95, entered some fine Poland China hogs. W. J. Yoeman, '93, was the breeder of the race horse, Helios, that sold for a high price at the fair. Mr. Yoeman is in charge of the high schools at Sylvia, Kansas. He breeds a few trotters for recreation.

J. L. Pelham, '07, superintendent of the Underwood orchards at Hutchinson, had a creditable exhibit of apples from that orchard arranged by K. C. Manny, '10, assistant field foreman. Miss Grace Berry, '10, now teacher of domestic science in the Reno County high schools at Nickerson, conducted a successful demonstration in biscuit making.

The college people had a meeting while there, attended by a number of former students and undergraduates.

The Lecture Course.

A particularly attractive program of lectures for the college year has been prepared by the committee having this work in charge. Prof. J. E. Kammeyer told the students in assembly a few mornings ago of the exceptionally interesting entertainment to be provided for them. In arranging this program the lecture course committee obligated itself to pay approximately \$2,500. To meet this obligation it is imperative that the students, their friends and parents, if their friends and parents live in Manhattan, buy the course tickets. These tickets cost \$2.00, less than twenty cents a lecture. The whole list follows:

Ferullo Band, Oct. 10; S. H. Clark, Oct. 20; S. H. Clark, Oct. 21; Jack Crawford, Oct. 24; Catherine Ridgeway, Oct. 28; Alpine Singers, Nov. 18; H. Smith McCowan, Dec. 5; Royal Welsh Ladies Choir, Dec. 19; Alton Packard, Jan. 13, General Sweeney, Jan. 28; Dunbar Male Quartet, Feb. 7, Bostonia Sextet Club, Feb. 22; Madison C. Peters, March 9; and E. A. Ott, March 31.

An interesting and very important innovation has been arranged for in connection with the lecture course. This is a detention room, or nursery, for babies or children likely to become restless if compelled to sit in the Auditorium. The Y. M. C. A. will be in charge of this room in the basement of the Auditorium. The babies may be checked there—and do not lose the check.

The Enrolment.

A count of assignments, made by Secretary Butterfield last Thursday, October 6, gave most gratifying results. There were present in class on that day:

	1910	1909	1908
Graduates	15	8	8
Seniors	228	148	115
Juniors	280	276	133
Sophomores	372	362	209
Freshmen.....	406	392	368
Subfreshmen.....	322	413	407
D. S. Short Course.....	138	107	85
Specials	35	61	25
Totals	1796	1767	1350

These figures by classes represent the attendance at about the same time of the fall term. They show a total increase of 29 over last year, 180 over two years ago, 190 over three years ago, and 446 over four years ago. They proclaim the steady growth of the great technical school of Kansas, but they also explain the crowded condition of the class rooms, laboratories and shops.

The American Institute of Electrical Engineers.

A special meeting of the American Institute of Electrical Engineers was held Friday, September 30, in room 60 of the chemistry building. These officers were elected:

H. H. Sloan, president; W. C. Lane, secretary; S. M. Ransopher, treasurer, and A. W. Seng, marshal.

Regular meetings are held monthly on the first Tuesday, in the chemistry building, room 60. All juniors and seniors interested in this line of work are invited to join the organization and to attend the meetings.

To Have Bible Study Classes.

The fraternities at K. S. A. C. will organize Bible study classes to meet in the fraternity houses once a week, probably Sunday mornings.

This was decided by the fraternities in a meeting in the Tau Omega Sigma house recently at which President Waters spoke. The meeting was a part of the Bible study campaign conducted by the Young Men's Christian Association. Clayton S. Cooper, of New York, who helped start the movement here to enroll Bible students, Coach "Mike" Ahearn, and E. T. Heald, Y. M. C. A. secretary, were also at this meeting and spoke briefly.

A Bible study course was conducted two years ago for frat men at one of the fraternity houses. No fraternity classes were conducted last year. The classes, this year, will be led by members of the faculty.

It Started Long Ago.

The idea that farmers should be business men, readers, educated along certain lines, is not so new as some folk imagine. In the *American Farmer* for March, 1824—published in Baltimore—the editor, J. S. Skinner, said:

"No longer is the practice of agriculture associated with the idea of mere brute force. Its votaries are expected to combine the polish and the pleasures of reading with better judgment in directing the labors of the field——."

Almost the same message is preached now daily to the farmers and farmers' son and daughters. It is the same message of better living, more application of brain power; the use of labor-saving machinery, all and everything tending to make of farming an occupation more attractive and profitable than it was eighty-six years ago when Editor Skinner wrote of an "uplift."

Local Notes.

Harry Smith, a student in the animal husbandry course, is in the southwestern part of the state judging stock this week.

More cement walks are being built about the shops. No walk will be laid from the new Engineering Hall to Anderson Hall at present because of the unsettled fill recently graded.

The new steam turbine now in operation for three or four weeks is giving good service. It requires three boilers to supply the steam. The turbine can develop 300 horse-power. The college will not be troubled this winter by lack of power, as it was last year.

What has become of the proposed athletic field? The answer is west of the Domestic Science and Art Hall, where J. W. Rodgers, a contractor of this city, has ten teams and a large force of men clearing away the rubbish and grading the field. The work is being hastened. Mr. Rodgers says he will finish his part of the contract in six weeks.

The work of the new alumni athletic field in the southwest corner of the college grounds is progressing. Contractor Rodgers has a force of eight teams and fifteen men excavating and moving dirt to reach the required grade. They will soon start laying the tile to drain this large area. The field is expected to be in readiness for the baseball and track season next spring.

A number of small glass aquaria have been obtained by the entomology department for use in the elementary zoölogy laboratory. In these receptacles have been placed minnows, water bugs and various forms of water plants for the observation of the students. By thus placing the living animals before the students the department expects to make this course more interesting and therefore more instructive to the student.

"Peace" was the subject of a very interesting chapel talk by W. A. McKeever, of the philosophy department, at Wednesday's assembly. He told in figures of the great cost of the army maintenance, one shot of the largest cannon costing the government as much as the education of one Kansas boy. It is not the people who agitate for so large an army, he said. In fact, Prof. McKeever's talk was very straight and convincing.

Royal Purple, Volume III, will appear next spring as a college annual. That is the dictum of the senior class that has the publication in hand. It will be more representative of the institution as a whole, and will give more space to every department of student activity than have the previous annuals. It will not all be senior. It will be college. The committee is working on a plan for publishing the pictures of the college board of instruction in next spring's annual. The list has not been run since 1906, and owing to the many changes in the list the committee believes it would prove interesting. The idea also is in keeping with the plan of making the book a college annual rather than a classbook. Work on gathering the copy has begun and contracts soon will be signed with engravers and printers.

Alumni and Former Students.

The Alumni Association is to meet in the old chapel at 4:30 p. m., October 10.

Wilma Evans, '09, writes for her *Herald* from Houston, Texas, where she is teaching domestic science in the schools.

Harvey Adams, '05, is visiting about college and the city. He will return later to the Philippine Constabulary at Manila.

Laurenz Greene, '06, was a college visitor last Monday. Mr. Greene is instructor in horticulture in the state agricultural college of Iowa.

Miss Irene Taylor, '08 in the domestic science course, is at the Lambda Lambda Theta house for "rush," which is sorority for being entertained.

K. C. Manny was a campus visitor Monday. He is assisting in the picking and packing of forty thousand bushels of apples from the orchards of the Underwood Orchard company, near Hutchinson.

Born to Mr. and Mrs. A. N. H. Beeman, Leavenworth, Sunday, October 2, a daughter to whom they have given the name Miriam Maude. Mr. Beeman is a Kansas State Agricultural College graduate of '05.

P. J. Meenen, '09, and Miss Zoa M. Hollopeter, a former student, were married, September 20, in Oklahoma City. After spending a few days at the Kansas State Agricultural College they will go to Pennsylvania.

Howard M. Chandler, '03, who has been working in San Francisco and the Hawaiian Islands as architectural draughtsman, will be in Manhattan in a few days to visit the college. He intends to spend the winter at his home in Kansas City.

W. W. Lawton, '10, is spending a few days in Manhattan with friends and acquaintances. He is on the way from Stafford, where he has been doing civil engineering work since graduation, to points on the Pacific coast. He will visit Seattle, Portland, and possibly Los Angeles.

A. G. Kittell, '09, of the *Mail and Breeze*, visited in Manhattan, several days of last week. Mr. Kittell called on the department of industrial journalism and was well pleased with the work being done there. "I wish," he said, "that we had had such a department here when I was a student."

W. P. Tucker, '91, and Stella (Kimball) Tucker, '94, have just marketed a successful crop of pineapples from their ranch at Arcadia, Florida. They write of prospects for a fair crop of oranges and an excellent crop of grape fruit. Mr. and Mrs. Tucker are delighted with their southern home.

W. E. Watkins, '06, is now on his homestead in Colorado near Ft. Collins. Being close to the Colorado Agricultural College, he will take work leading to an advanced degree.

S. I. Wilkin, former student, has for the last year been secretary of the Farmers' Union at Hoxie, Kansas. He has been adding considerably to the comforts and luxuries of that community by shipping in car-loads of apples and potatoes that have been distributed through the agency of the union. Mr. Wilkin's successor has been elected. He and Bonnie (Adams) Wilkin, '99, and their small son are taking a wagon trip through Kansas to visit Manhattan and Olathe, Mr. Wilkin's former home. They also will visit points in Missouri, Oklahoma and Arkansas.

Changes of address: John S. Griffing, '77, Blackfoot, Idaho; C. E. Wood, '79, Bushyhead, Oklahoma; Ida (Quinby) Gardiner, '86, 1514 Laguna Street, Santa Barbara, California; C. A. Murphy, '87, Little River, Kansas; M. A. Carleton, '87, 1743 Kilbourne Street, Washington, D. C.; Stanley Snyder, '89, Dodge City, Kansas; John E. Thackrey, '93, 8368 Lucile Avenue, St. Louis, Missouri; Laura G. Day, '93, 417 Wabash Avenue, Wichita, Kansas; Gertrude (Lyman) Hall, '97, 415 Park Street, Madison, Wisconsin; C. E. Rice, '97, Bureau of Customs, Manila, P. I.; Mark Wheeler, '97, Fort Davis, Nome, Alaska; R. H. Pond, '98, College Station, Texas; Louise M. Spohr, '99, care of St. Luke's Hospital, Chicago; J. W. Harner, '00, and '09, Paris, Texas; Erma Locke, '01, Phillipsburg, Kansas; F. W. Haselwood, '01, and Maud (Zimmerman) Haselwood, '02, 1624 Bonita Avenue, Berkeley, California; C. A. Gingery, '02, Light, Arizona; H. B. Holroyd, '03, U. S. Forest Service, Fort Collins, Colorado; C. H. Kyle and Corinne (Failyer) Kyle, '03, North Augusta, South Carolina; Alexis J. Reed, '03, 6116 Colby Avenue, Oakland, California; R. N. Dorman, '04, 1525 N. Monroe Street, Topeka; Jas. G. Arbuthnot, '04, Corvallis, Oregon; C. A. Pyle and Vera (McDonald) Pyle, '04, Morrill, Kansas; Grace E. Umberger, '05, 509 Honore Street, Chicago; Smith Faris, '06, 624 S. Washington Square, Philadelphia; F. A. Kiene, '06, Fort Scott, Kansas; Cecile Allentharp, '07, Laramie, Wyoming; J. E. Cooley, '07, 1453 Adams Street, Chicago; Eva (Alspaugh) Zercher, '08, Tyler, Texas; George G. Goheen, '08, 16 N. College Street, Schenectady, New York; Leon G. Hoffman, '08, Yocemento, Kansas; O. H. Gish, '08, Bluemont, Virginia; Dan Walters, '08, Garden City, Kansas; H. S. Records, '09, Montpelier, Indiana; Jas. R. Coxen, '07, San Marcos, Texas; A. B. Carnahan, '05, Gilbert, Minnesota; Frank E. Uhl, '96, 817 Colorado Street, Manhattan, Kansas; O. L. Utter, '88, Eaton, Ohio; Claude Masters, '99, 118½ West Main Street, Oklahoma City, Oklahoma; Louis B. Bender, '04, Fort Monroe, Virginia; R. C. Thompson, '08, Fayetteville, Arkansas; Marcia Turner, '06, Fort Scott, Kansas; O. H. Halstead, '95, 305 N. Fifteenth Street, St. Joseph, Missouri; P. C. Milner, '91, 4227 N. Pauline Street, Chicago; L. W. Hayes, '96, 180 Twiss Avenue, Topeka; H. M. Bainer, '00, Amarillo, Texas; Charles F. Clark, after October 1, Bureau of Plant Industry, Washington.

THE INDUSTRIALIST

Vol. 37

Saturday, October 15, 1910

No. 3

Issued Weekly By
Kansas State Agricultural College
Manhattan, Kansas

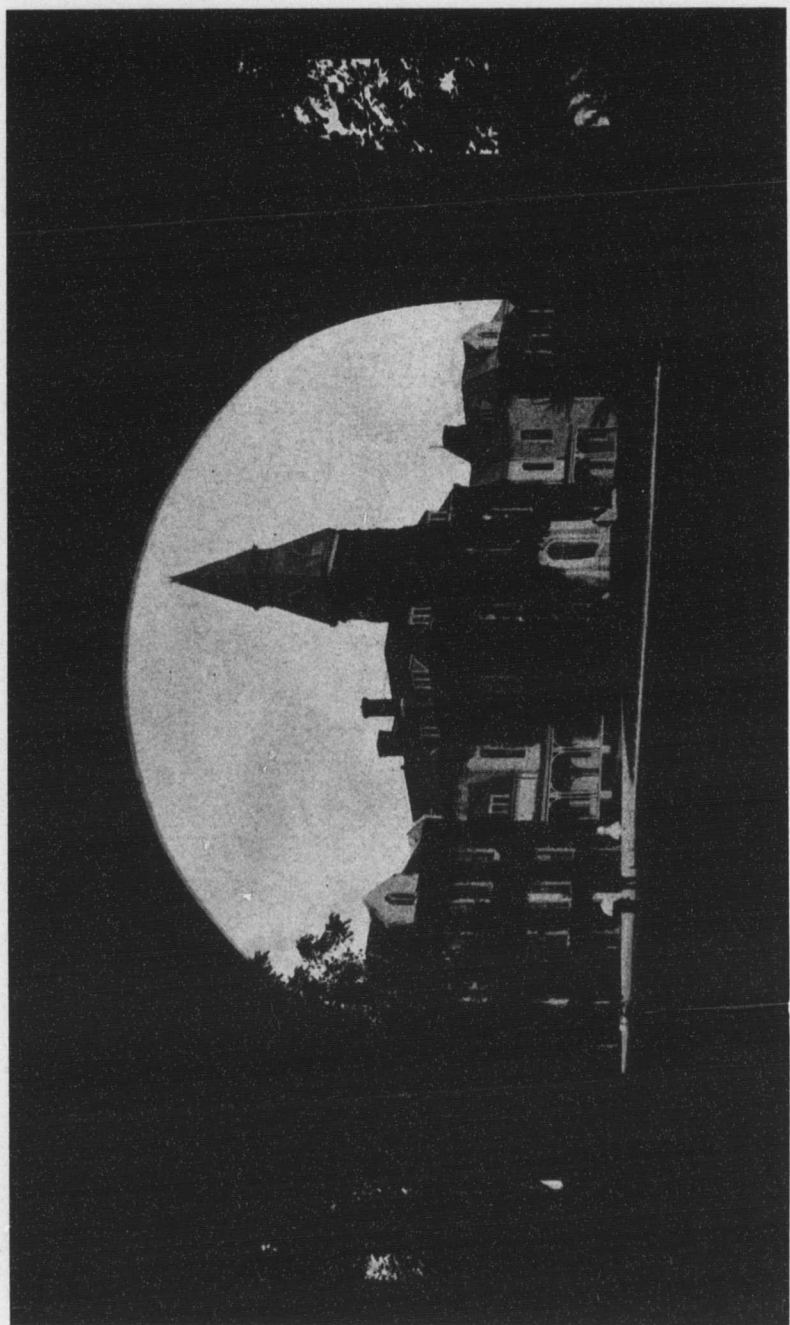


STAFF

Pres. H. J. Waters, Editor-in-Chief
Prof. C. J. Dillon, Managing Editor
Dr. J. D. Walters, Local Editor
Dr. J. T. Willard, Alumni Editor

Published by
PRINTING DEPARTMENT
J. D. Rickman, Supt.

Entered at post-office, Manhattan, Kan., as second-class matter. Act of July 16, 1894.



Anderson Hall.

changed size with no 4. Rest of vol 37 and
vol 38 in newspaper Room.

THE INDUSTRIALIST

VOL. 37.

MANHATTAN, KAN., OCTOBER 15, 1910.

No. 3

Lusk on Nutrition.

Dr. J. T. Willard, Professor of Chemistry.

The need of a second edition of Lusk's "The Science of Nutrition" is in itself an indication of the favor with which the first edition was received. This book is not one designed to appeal to those desiring a popular presentation of questions of nutrition. It is written in a very much condensed style, but with great accuracy and clearness of statement. At times it reads almost like a set of lecture notes. It is exceedingly valuable for reference in that it includes so many of the actual tabulated results of experiments that lead to conclusions, rather than mere statements of the conclusions. The nutritive processes are so intricate in their complexity, and so difficult of investigation, that the ordinary reader or student often fails completely in getting a proper impression because of the easy dogmatic fashion with which much is written on these subjects. Comparatively few can observe experimentation for themselves, and it is of the greatest advantage to the others that we have a book of this character in which one may be brought in touch even if in shorthand fashion with the laborious and painstaking researches that constitute the foundation for our opinions concerning body processes.

One cannot fail to be impressed in reading such works with our absolute dependence upon the lower animals for the experimental data that enables us to understand ourselves as far as we do. While of course one cannot condone the infliction of unnecessary pain upon animals, the fact remains that we know very little concerning physiology that has not been gained through observation and experiment upon the lower animals.

The best mode of presenting a complex subject must always call for much thought on the part of the author, and diversity of method is the rule among those who have written on nutrition. Doctor Lusk's book consists of a series of chapters on definite subjects as related to the nutritive process, thus becoming very convenient for study of such special phases or conditions, though possessing some drawbacks as a systematic, logical presentation

of the whole. The body losses under starvation without labor are first presented as being those which represent the fewest factors of the nutrition problem. The effect of work and starvation together then receives attention. The regulation of temperature is the subject of the next chapter. This is developed in a thorough manner, and many whose reading has been confined to the more popular class of books would be much informed by a study of this chapter. The influence of protein food on metabolism, the specific dynamic action of the food stuffs, the influence of the ingestion of fat and carbohydrates, and the influence of mechanical work on metabolism are treated in the next chapters. Two chapters are then given to consideration of food requirements and these are followed by studies of the metabolism accompanying anemia, diabetes, fever, gout and other pathological conditions. These chapters are the most interesting in the book and are enriched by the results of many researches in which the author himself participated. A short concluding chapter is upon the theory of metabolism. This will be rather disappointing to one who expects to find there a satisfying statement of how and why the metabolic processes attendant upon life occur. This is not to be taken as a criticism of the author. Notwithstanding the laborious and enlightening researches epitomized in the preceding pages, the student is finally left in the presence of the unfathomed mystery of life. The last paragraph reads: "However clearly formulated the laws of metabolism may be, and many of them are as fixed and definite as are any laws of physics and chemistry, still the primary cause of metabolism remains a hidden secret of the bioplasm."

This second edition extends to less than four hundred pages, but is about twenty per cent larger than the first. The increase is due to the incorporation of the results of investigations of the three intervening years. As a condensed, systematic, scientific presentation of hundreds of experiments and investigational observations touching the nutritive processes of the animal body, Doctor Lusk's book is indispensable for every student of human nutrition.

In the class studying the history of education an unusual feature has been adopted by the students. A special library of reference books upon the subject has been ordered. These books, although paid for by the class, will be placed in the general library for reference.

After the Flour Mill Insects.

If there is one thing that bugs do hate it is hydrocyanic acid gas. Doctor Hyde did a lot to awaken interest in the possibilities of this product when he told of his experiments in that line to explain his purchase of cyanide. Every farmer in Kansas, and particularly every miller, read the proceedings of the trial and talked about the drug that could throw off such a deadly gas. It stirred their interest and, in a way that few might suspect, helped the experts from the Kansas State Agricultural College in their work of cleaning up the flour mills and driving out the thirty-eight or forty insects that do damage annually estimated at more than two million dollars. Just as war teaches geography so did the Hyde trial give a boost to cyanide and its products with the result that to-day, the experts say, farmers and millers everywhere in the state speak of the great insect destroyer as "Hyde Dope."

And it kills, too—no doubt of that. For years nothing had been done to offset the destruction for which these little pests were responsible, but this summer the Agricultural College has kept four men busy constantly in the work. These men have inspected more than 140 flour mills of the 250 in the State. They have told the miller exactly what to do and how to do it and, where requested have directed the work or have done it themselves; for, be it remembered that one breath of hydrocyanic acid gas will kill a human instantly. Caution is needed in its handling. The farmer or miller who sealed his grainary or mill and started this gas might not get away in time. For that reason it is recommended for use only by experts.

Only one of these thirty-eight or forty insects now causing so much trouble is a native of the United States; the others came in with seed wheat or other shipment from abroad. The worst of the whole family is the little rust red flour beetles, of which there are five or six varieties. Ninety per cent of the wormy flour in the world to-day was ruined by these beetles. Second in importance, but first in the damage they can do a mill, are the Mediterranean flour moths. In six months these busy little pests will clog and "enweb" the machinery in a flour mill so that it cannot run. In some instances it costs \$600 to clean the mill, where if scientific advice had been heeded the work might have been done for \$125.

The most interesting and important experiments and tests are now being conducted in the entomological department of the Agricultural College at Manhattan. George A. Dean, M. S., assistant professor of entomology, has charge of the work in this particular

field. Two men are studying the life habits of the insects so that farmers and millers may know how to attack them. Others are testing to learn how long is required to kill them with hydrocyanic acid gas; the eggs are studied; baking tests are conducted to determine the effects of the treatment upon flour. Probably the most interesting feature of the whole work is the incubator section and the display of the many pests with which farmers and millers have to contend.

"It must be a fight constantly, from the farmers to the people's stomachs," Professor Dean said yesterday. "We have found that although flour left a clean mill in excellent condition it would be infested before it arrived in New Orleans. Investigation showed the insects in cars on sidings, on wharves, in steamships and many other places. Only the most rigid rules and the most careful work in every state will wipe out these expensive pests. It must be a matter of interstate activity and coöperation. The millers of Kansas are organized and have men visit the East and South to study conditions and advise the proper course to pursue. The most important work, however, will be in the experiments now under way. We found the Mediterranean moth, for instance, in thirty mills in Kansas. We shall have to hustle to overcome the destructive habits of these pests; every state should help. The people's food is endangered."

When a mill is empty or only partly filled the K. S. A. C. experts under Professor Dean advise using hydrocyanic acid gas. It is a light gas and penetrates every part of the machinery and building but has little effect on the grain or flour. Where large stores of flour or grain are present carbon bisulphide is used. It goes through the grain and kills the insects. The experiments in the laboratory at Manhattan will show how deeply the bisulphide goes. Government experts declare flour and grain are not injured by the action of hydrocyanic acid gas or carbon bisulphide. The experiments now under way in the Kansas Agricultural College had been started when the Kansas millers association asked the college to take charge of the fumigating of mills throughout the state. Marine insurance, it was declared, could no longer be obtained on flour and grain shipments for export unless mills in which the shipments originated had been cleaned and fumigated. The college undertook the work this summer. Bulletins describing the progress of the investigations are to be published later.

Twenty Bible-study classes have been organized by the Young Women's Christian Association.

Why He Came to College.

Why does a young man come to the Kansas State Agricultural College? What does he expect to do afterward?

One young man, for instance, after graduation from high school, and an experience of four years covering work in selling men's clothing, walking one of Rockefeller's gas-pipe lines, and "cubbing" on a country daily, came to a realization that his field of activities as an untrained man was limited.

Looking about he saw men that had been working for the clothing merchant, in the town in which he lived, for a score of years, that were not getting much higher wages than he. But what he feared most was the deep and narrow rut in which they had gotten. He saw dissatisfied old men that had been working for Rockefeller since their youth. They feared they would lose their positions through the false witness of their fellow workmen or a drunken boss. When starting work on the pipe line the young man was taken aside by one of the head men and instructed regarding his attitude toward the public while in the employ of the company, which was in substance—tell them anything except the truth.

This wasn't what the young man desired. He wanted a chance to benefit the community in which he lived. To feel that his efforts were worth while, aside from money making. His work on the country daily strengthened his desire to get in a good live industrial college. "Keep out of a rut" was ever before him. Being convinced in his own mind, having a liking for agriculture from a three-years life on a farm, and realizing the possibilities of this field as a life work, he chose the Kansas State Agricultural College.

Upon graduation this young man expects to return home and get in some good licks for the rural population of the county. A farm on an interurban line will be purchased. A daily farm paper for that county will be started. The paper will contain a brief news report, live stock and produce markets, weather report and forecast, crop report of the county, rainfall, all the news of the county, and live farm topics in particular. The publication will be a morning paper, as the train service is such that all the larger towns of the county can be reached in time to give the farmer on the rural route his paper the same morning it is published.

The county in which this young man lives hasn't made much progress agriculturally the last ten years, as gas and oil have been found there. When a farmer gets \$5 an acre a year for a gas lease on his farm he loses interest in the hog business or the

dairy. He is more interested in the price of motor tires, how far he can run his car on a gallon of gasoline, and whether he had better drive through to visit the folks "back east," or have his "6 cylinder 60" shipped.

The high price of garden truck and other farm products has caused the pendulum to swing back. Farms that had been abandoned are being put under cultivation.

A herd of pure-bred dairy cattle and a herd of pure-bred hogs will be started by this college young man to prove to the farmers the possibilities of these two branches of animal industry, under the same climatic conditions, and with the same feed stuffs as are at their command.

The average yield of corn is not what it should be, and a variety of corn adapted to their needs will be bred to supply the farmers with pure-bred seed in an attempt to increase this yield. Z.

A Municipal Library Here?

Why not have in the Kansas State Agricultural College a municipal library? Why not have in this library the charters of the principal cities, and copies of the important franchises? At a small cost to the state a library of national importance could be gathered and maintained.

American city government is, and will continue to be, the subject of discussion. Perhaps of all evils practiced upon the non-suspecting public nothing has been so flagrant and malicious as the charters and franchises framed by selfish politicians. Cities throughout America are laboring under such unjust bonds—agreed upon to be sure, but agreed upon only because of ignorance upon such matters.

American cities have paid dearly for this experience. Many cities have become aroused and have adopted new charters and have refused to renew franchises, except when just both to themselves and to the corporations. The cities of America are in the process of rebuilding.

It is worth the time and money spent by an educational institution touching the masses as does the Kansas State Agricultural College, to place before its constituency an array of evidence gathered from many cities. If Kansas towns are to avoid these snags; if Kansas towns are to remain an unrestricted and free institution, it will be only by enlightening the people upon such questions.

The Kansas State Agricultural College is an excellent place for such a library. It would soon prove itself invaluable to debaters, for subjects bearing upon such statistics are excellent for college discussion. It would be a great help to classes, as assigned readings could be made to the various forms of charters, the evils of one franchise and the good points of another.

The benefits derived from such a library would be important to the student and it would also be important to inquiring cities. Perhaps a town now is offered a street-car franchise for fifty years and to them it seems an excellent opportunity for the old town. The officials visit the library of municipal charters at the Kansas State Agricultural College and find that just such a franchise was adopted by another city and that that city has been a subject of prey ever since.

Kansas has been a leader in the new form of city government by a commission which makes it even more necessary for such a library to be established here. This is the coming field of action. Kansas people are awaking and demanding a change from machine control.

G. B. H.

Four Bird Families in Disgrace.

A death sentence has been pronounced upon four families of birds in Kansas: Sparrows, blackbirds, crows, and jay-birds.

The sentence is legal in the case of two of these families. Public opinion is responsible for the others' fate.

Many persons believe these four bird families do more damage than good to crops. There is an almost uniform bounty of five cents apiece for crows and a smaller, less uniform bounty for sparrows. Blackbirds and jays have so far escaped a bounty, but they are under fire of the farmers to almost as great a degree as crows.

Sparrows have fewer redeeming characteristics than any of the others. They do much damage to crops, especially to the small grain crops, and do very little to compensate a farmer for letting them live.

Although blackbirds do much damage to corn and other crops, credit must be given them for partly paying their board by catching worms and insects. While young they live wholly upon insects. The old birds will follow the plow in the spring and pick up all the grubworms, after scratching them out of the loose soil. The greatest damage done to crops by this bird is in the spring when the corn is coming up. The birds eat the seeds and scatter the plants. In some communities they also eat much of the corn

when it is in the milky stage. Their appetite for insects is all that saves them, and the scales are so evenly balanced that it is still a question whether the blackbird should be killed. Public sentiment is constantly growing in favor of his destruction.

The habits of the crow are very similar to those of the blackbird. Crows do more damage in the fall after the crop is cut and shocked than before it is cut. They are not such great insect destroyers as are the blackbirds, but they make up for this deficiency by their work as scavengers. Where crows are numerous it is almost impossible to get a good stand of corn or any other crop that grows slowly at first. They became so numerous a few years ago as to be a menace. The law providing for a bounty on crows' scalps was the result.

The jay is more of a nuisance than the others. His greatest fault is robbing the nests of other more desirable birds. He not only destroys the eggs but if the young are hatched he kills them. His greatest enemy is the owl, a very useful bird. Because of his destructiveness the jay-bird has been sentenced, by public opinion, to execution.

The blackbird's death is not generally conceded to be a necessity. Unless they become too numerous the destruction they do will be more than balanced by the good service. As they now are in Kansas they should be looked upon as an economic good and not be destroyed.

First Meeting of the Science Club.

The Science Club held its first meeting Monday night, October 3. The paper of the evening was by Thomas B. Haslam, assistant in the department of veterinary science, and was devoted to the discussion of his investigations upon blind staggers in horses and its relation to pellagra in man.

Blind staggers is caused apparently by horses eating mouldy corn. Feeding experiments with mouldy corn resulted in the death of the five animals experimented with, within a period of from 40-50 days. Pure single-spore cultures were made of each of the species of moulds found on the corn, and of one species of bacterium. The principal mould species were also studied with respect to their relative occupation of the ear in point of area. From the pure mould cultures larger cultures in sterile stone jars were then grown under conditions which precluded contamination. The culture medium in the jars was sterilized green corn, ground moderately fine. The cultures penetrated this medium and grew

luxuriantly to the very bottom of the jars. One-quarter of the mould culture in a jar for each of the principal species under experiment has been fed at a feeding to horses for a period now reaching 80 days, with absolutely no injurious effect to the animals whatever. The quantity of mould fed was found to be all that the animal would permit in his food without rejecting it, and was far in excess of what horses would ever find and eat in the field. In view of the fact that the ears of mouldy corn caused death when fed to the horses, whereas the pure mould cultures did not, a theory was raised of a toxin in the corn itself, independent of the moulds, and attention was directed to the proteids of corn. An extract was made of the proteid of corn taken from immature ears. A small quantity of this proteid extract, given to rabbits in the stomach, resulted in death within a few hours. A sufficient quantity of the extract to furnish doses for a feeding experiment with horses has not yet been obtained. The experiment will not be fully concluded until the close of another season, but the prospects are that the cause of blind staggers, and perhaps also of pellagra, will be definitely ascertained as a result of this experiment. The present outlook is that the cause of blind staggers is not to be found in the species of mould growing on the corn, but in a toxin in immature corn, being possibly in one of the proteid compounds.

Mr. Haslam's paper was one of the best that has ever been presented to the Science Club, and was thoroughly appreciated. The club is to meet the first Monday night in November.

How Things Are Made.

How many women know anything of the tools, utensils and materials they use? Not many.

Usually it is enough if they have a thimble, or a bread knife, or buttons. How and where they were made, and why, the average woman doesn't know. If the men know more they seldom give any proof of it.

Several exhibits in the office of Antonetta Becker, professor of domestic art in the Kansas State Agricultural College, are exceptionally interesting. The exhibits are used by Miss Becker in her lectures to the girls of her department.

Miss Becker brought the exhibits from the East this fall after her vacation. One shows the steps in the making of a pair of shears from the rough casting to the completed tool, polished and ready for use.

The needle in the making will be the subject of one lecture. The cutting from a steel wire coil; the straightening and pointing; stamping, grooving and eyeing; the burnishing and hardening; cleaning and polishing; how they are sorted, wrapped and labeled—every step will be explained briefly but clearly.

The exhibits include the thimble and its evolution from a piece of German silver to the finished article, and buttons made from the Ivory nut. The several talks will lead up to the more practicable part of the course. Textiles will be studied carefully. A hand loom has been ordered from a Boston firm for the use of the girls. Weaving will receive considerable attention, with especial reference to the selecting of cloth. No department store clerk will be able to palm off inferior goods on the girl graduates of the agricultural college. Rugs must be as represented. The girls will know what they want and whether they get what they want when they ask for it.

The enrolment, this fall, in the domestic science and art departments includes, in addition to Kansas girls, students from Kansas University, Baker, Washburn, State Normal, Midland College, Chicago University, Purdue (Indiana), and Louisiana.

The Printing Course as an Asset.

Can you spell? Punctuate? Can you write a letter that gives the reader a clear and exact idea of what you are trying to tell him? If not, and there are few who can, a course in printing will do wonders for you.

In the business world, to-day, the man that can write a letter describing whatever project he may be pushing clearly and concisely has an advantage over one that may have the same executive ability but lacks the power of expression.

A course in printing teaches accuracy, neatness, exactness. The author that has worked in a print-shop will be likely to send in his copy correctly written the first time, and not in such condition that he must revise it after it has been set up, perhaps necessitating changing half a column to allow an extra clause to be inserted.

No better place than the print-shop for teaching the value of punctuality can be found. The printer in business will have his advertising ready; he will answer his letters on time; he will be at work on time and all the time.

A knowledge of printing composition, ad.-setting, pressroom work, is an essential to the young student in journalism that

hopes some day to edit a paper. He will be more than repaid for the time and money spent in taking the work by knowing whether his employees are doing the work they should be doing. The man that knows always has an advantage over the man that depends upon others to tell him.

The newspaper man should have a knowledge of printing; the business man that is something of a printer is that much more of a business man.

How About Those Nurses?

Where was the nursery and why weren't the nurses "on the job" last Monday night? Six babies with lungs in excellent condition were taken through the lines at the first number of the lecture course—which, happily, was a concert—and every baby did what it could at times to keep Ferullo guessing about which could make the most noise: the band or the babies. They were quiet for awhile, as most babies are. It was in the most tragic part of the Carmen number that the little sextette broke in.

The dagger had been withdrawn, and the band "resting" in the hush of death, just preceding the sobbing of the reed instruments and the wailing of the brasses. Suddenly two or more little mouths were opened and shrieks of anguish arose. The offenders were quickly removed, but John Z's guards are disgraced.

The Y. M. C. A. Record 563.

The membership of the Y. M. C. A. is the largest in the history of the local association. Five hundred and sixty-three men are now on the rolls with more joining every day. The gymnasium work under O. C. Thompson is proving very popular.

The fall campaign for memberships was closed Tuesday night with a supper at the Presbyterian chapel in honor of the team getting the most members.

Erwin Fuller's team won with a record of 42. Fuller also won the watch fob, offered for the best individual record, by talking 35 men into the association.

J. C. Cunningham acted as toast-master at the supper. A. R. Springer, B. F. Eyer, professor of electrical engineering, O. C. Thompson, Erwin Fuller, Warren Crabtree, Clif Stratton and E. T. Heald responded to toasts.

Local Notes.

Dr. K. W. Stouder is in South-central Kansas on cattle work.

Henry Miller, a farmer from Abilene, Kansas, was visiting the college, Thursday.

The room used last year for the engineers' society hall is being converted into a pattern room for the foundry.

W. P. Shuler returned Thursday from Topeka, where he has been testing cattle for tuberculosis.

Dr. E. F. Kubin, of the veterinary department, is in Northwestern Kansas this week vaccinating hogs for cholera.

Two teachers in the public schools of Manhattan are studying vocal music and water-color work in the college Saturday classes.

H. Ray Anderson, a senior in the general science course, has been appointed laboratory assistant in the senior psychology classes.

The membership of the Y. W. C. A. is growing steadily. Flora Hull, general secretary, expects an increase of 100 over last year's record of 450.

The noon hour for the shops and power plant has been made to correspond with that of the college. The whistle will blow at 7:30, 12:30, 1:30 and 5:30.

R. P. Evans, county attorney of Riley County, was showing his cousin, Mr. Conway, of Chicago, the college and campus, Tuesday. Mr. Conway was very much interested in the work of the college.

The class in methods of study has become so large that a second class had to be organized. E. L. Holton, professor of rural education in the extension department, has been placed in charge of one of these classes.

Mrs. Mary VanZile, dean of home economics, attended the convention of the State Federation of Women's Clubs of Kansas at Horton, Tuesday and Wednesday. She read a paper, Wednesday afternoon, on "Balanced Rations."

Classes in blacksmithing have been arranged for. A drill press, an emery stand having two wheels, one coarse, the other fine, and a cutting machine that cuts all sizes of iron up to $\frac{3}{4}$ inch, round or square, have been installed.

G. Eldon Thompson arrived Monday from Akron, Colorado, where he had charge of the forage crops division of the U. S. Bureau of Plant Industry this summer. He has taken an assignment and will resume his studies here.

The agronomy department will use its section of the new greenhouse to grow grains, grasses and fiber crops for class-room use. In addition to the common plants, tobacco, cotton and other crops not commercially grown here will be produced so the students may know their habits of growth.

The power plant was shut down for a few days this week to give an opportunity to install an economizer. This will connect the three high-pressure boilers with the flue. Its purpose is to heat the water before it enters the boilers. It is estimated will make a saving of about 10 per cent in coal.

Visitors at the college usually go first to the domestic science building. This is the belief of the domestic science "family," at any rate. A guard stationed in the building would be kept busy. Ten to twenty visitors a day takes too much of the instructors' time. Every visitor desires all the details explained.

An Ayrshire calf that weighed 23 pounds two days after the stork left it at the dairy barn has received much attention the last week. Now, 23 pounds isn't much for a calf, but this one's mother is only two years old and not very large. The calf referred to is the smallest the dairy barn has had to shelter for a very long time. But it is apparently healthy and doubtless will become a prize-winning steer some day.

It is now Captain Charles H. Boice. The commission, effective October 1, was received Friday. Captain Boice went into the Spanish-American war as a private in the First N. Y. Volunteers. He was twice recommended for promotion in the Philippines for meritorious conduct in action. His term as commandant at this college will end a year from next month. He probably will go to the Philippines with the Eighth Cavalry.

It was an unusual thing, until about two years ago, for an instructor to receive typewritten laboratory notes and themes. Now it has become a custom, for the student looks for the return of his notes that they may be filed and bound for later use. Fewer than ten typewriters were used two years ago by the students at K. S. A. C. Now that number would have to be multiplied by ten; perhaps more. Anyway, one agency in the city has developed a large rental business; and many students own their own machines.

President Waters reports the total cash contributions to the fund for the construction of the new athletic field last Thursday at \$687.40. The cash amounts received since August 11 are as follows:

Geo. Wolf, '05.....	\$10 00
Victor L. Cory, '04.....	2 50
Amy Allen, '04.....	5 00
Jessie Allen, '08.....	5 00
E. S. Adams, '98.....	10 00
H. Umberger, '05.....	5 00
L. W. Lawson, '07.....	5 00
Harvey A. Burt, '05.....	5 00
May (Harris) Burt, '05.....	5 00
Alfred H. Baird, '07.....	5 00
F. A. Kiene, '06.....	15 00
Helen B. Thompson, '03.....	5 00
Frank C. Harris, '08.....	5 00
A. G. Philips, '07.....	5 00

Two of these contributors have subscribed for larger amounts, but are paying their contributions by installments.

Alumni and Former Students.

Frank C. Lewis, a senior last year, is teaching manual training and science in the high school at Ritzville, Washington.

F. A. Lane and Mrs. Lane, of Burlington, Kansas, are visiting Mr. Lane's brother, W. C. Lane, '05, assistant in electrical engineering.

Claudius Stewart, '06, is working for the Canadian government. He is in the Alberta's northwest country in the electrical engineering department.

Mr. and Mrs. C. V. Holsinger, both '95, announce the birth of a son Tuesday, October 11. Mr. Holsinger is connected with the extension department of the college.

Guy D. Noel, '09, visited the home folk last Sunday. Mr. Noel has charge of agriculture, manual training and athletics of the Dickinson county high school at Chapman, Kansas.

Lester Allen Ramsey, '06, was here for the football game with the State Normal. Mr. Ramsey is erecting ice and refrigeration plants for the York Manufacturing Company, of York, Pa.

Fred Walters, contractor, is building, in the Hammond addition, a home for Harry Brown, assistant professor of music. The plans were drawn by H. Winter. Walters, Brown and Winter are alumni of the college.

William DeOzro Davis, '04, better known as "Skelly," was in Manhattan for the Aggie-Normal football game, October 8. He is assistant chief electrician of the mechanical department of the Atchison, Topeka and Santa Fé, at Topeka.

E. H. Webster, '96, dean of agriculture, and Albert Dickens, '93, professor of horticulture, were elected members of the board of directors at a special meeting of the Alumni Association Monday, October 10. No other business was transacted. The attendance was small.

One of the most interested visitors to the National Dairy Show in Milwaukee was T. Ogawa, scion of wealthy Japanese parents and a graduate of the Kansas State Agricultural College. He was accompanied by A. Miyawaki, assistant dairy instructor in the Kansas institution. Mr. Ogawa is employed on the farm of L. G. Oder, Juda, Wisconsin, and is now working as a practical dairyman and butter maker, preparatory to returning to Japan, there to join others in the development of dairying in his own country.

H. W. Brinkman, architect, '07, writes to Professor Walters from Emporia: "Have not written you for some time, but there is a good excuse—I have been overloaded with work. There is work enough in my office to last at least four months. I have 21 jobs on hand, ranging from about \$10,000 up to \$50,000. Besides, I am supervising the construction of a \$300,000 Catholic cathedral in Wichita, for which plans were drawn by Mas Mergne, of Milwaukee. So you see I am well occupied. I wish D. W. had stayed with me."

THE INDUSTRIALIST.

PRES. H. J. WATERS.....	Editor-in-Chief
PROF. C. J. DILLON.....	Managing Editor
DR. J. D. WALTERS.....	Local Editor
DR. J. T. WILLARD.....	Alumni Editor

BOARD OF REGENTS.

HON. W. E. BLACKBURN, President.....	Anthony
HON. J. O. TULLOSS ['99], Vice-President.....	Sedan
HON. EDWIN TAYLOR.....	Edwardsville
HON. ARTHUR CAPPER.....	Topeka
HON. A. L. SPONSER.....	Hutchinson
HON. TOM BLODGETT.....	Wichita
PRES. H. J. WATERS, Secretary <i>ex-officio</i>	Manhattan

BOARD OF INSTRUCTION.

Henry Jackson Waters, B. S. A.....	President of the College
John Daniel Walters, D. A.	Professor of Architecture and Drawing
Julius Terrass Willard, D. Sc.....	Dean of Science, Professor of Chemistry
Joshua Douglas Rickman.....	Superintendent of Printing
Benjamin Luce Remick, Ph. M.	Professor of Mathematics
Benjamin Franklin Eyer, E. E.....	Professor of Electrical Engineering
Herbert Fuller Roberts, M. S.	Professor of Botany
William Arch McKeever, Ph. M.....	Professor of Philosophy
Edmund Burke McCormick, B. S.....	Dean of Mechanic Arts, Director Engineering Experiment Station, Professor of Power and Experimental Engineering
Albert Dickens, M. S.....	Professor of Horticulture
Clark Mills Brink, Ph. D.....	Prof. of Eng. Language and Lit, Dean of the Coll., Asst. to Pres.
Albert Moore Ten Eyck, M. S.....	Prof. of Farm Mgt., Supt. Ft. Hays Branch Agr. Exp. Sta.
Ralph Ray Price, A. M.....	Professor of History and Civics
Julius Ernest Kammeyer, A. M.....	Professor of Economics and Director of Public Speaking
John Vanzandt Cortelyou, Ph. D.....	Professor of German
Olof Valley, B. M.....	Professor of Music
Francis S. Schoenleber, D. V. S.....	Professor of Veterinary Medicine
Roland Jacob Kinzer, B. S. A.....	Professor of Animal Husbandry
John Harold Miller, A. M.....	Superintendent of Agricultural Extension
Thomas J Headlee, Ph. D.....	Professor of Entomology and Geology
Charles Henry Boice.....	First Lieutenant U. S. A., Professor of Military Science
John Orr Hamilton, B. S.	Professor of Physics
Mary Pierce Van Zile.....	Professor of Domestic Science and Dean of Women
Edwin Harrison Webster, M. S.	Director of Agr. Exp. Sta. and Dean of Agriculture
Lowell Edwin Conrad, M. S.....	Professor of Civil Engineering
Antonetta Becker.....	Professor of Domestic Art
Charles A. Scott, B. S.....	State Forester
Leslie Arthur Fitz, B. S.....	In Charge of Department of Milling Industry
Edwin Lee Holton, A. B.....	Professor of Rural Education, Extension Department
Andrey Abraham Potter, B. S.....	Professor of Steam and Gas Engineering: In Charge of Course in Mechanical Engineering
Roy Andrew Seaton, M. S. t.....	Professor of Applied Mechanics and Hydraulics
W. M. Jardine.....	Professor of Agronomy, Superintendent of Farm
Gertrude A. Barnes.....	Librarian
Francis Hervey Slack, M. D.....	Professor of Bacteriology
Blanche Earl Enyart, A. B.....	Director of Physical Training for Women
Charles J. Dillon.....	Professor of Industrial Journalism
James William Searson, A. M.....	Associate Professor of English
Jacob Lund, M. S.....	Superintendent Heat and Power Department
Robert Henry Brown, B. M.....	Assistant Professor of Music
George Adam Dean, M. S.....	Assistant Professor of Entomology
William Hiddleston Andrews, A. B.....	Assistant Professor of Mathematics
George Carpenter Wheeler, B. S.....	Lecturer on Farm Management, Agr. College Ext. Dept.
Leland Everett Call, B. S. A.....	Assistant Professor of Soils
Pleasant E. Crabtree.....	Lecturer on Farm Management, Agr. College Ext. Dept.
Kirk Whitney Stouder, D. V. M.	Assistant Professor of Veterinary Medicine
Leonard Whittlesey Goss, D. V. M.....	Assistant Professor of Veterinary Medicine
Ula May Dow, B. S.....	Assistant Professor of Domestic Science

*Beginning September 1, 1910. †On leave of absence during season 1910-'11.

Herbert Hiram King, A. M.	Assistant Professor of Chemistry
John Bennett Whelan, A. M.	Assistant Professor of Chemistry
Robert John Barnett, B. S.	Assistant Professor of Mathematics
Louis Henry Beall, A. B.	Assistant Professor of English Language and Literature
George Eben Bray, M. E.	Asst. Prof. of Shop Methods and Practice, Superintendent of Shops
Wilmer Esia Davis, A. B.	Assistant Professor of Botany
Franklin George King, B. S. A.	Assistant Professor of Animal Husbandry
Charles Oscar Swanson, M. Agr.	Assistant Professor of Agricultural Chemistry
O. E. Reed, B. S. A.	Assistant Professor of Dairy Husbandry
Clarence Victor Holsinger.	Lecturer on Horticulture, Agricultural College Extension Dept.
Frances Langdon Brown, B. S.	Lecturer on Domestic Science, Agricultural College Ext. Dept.
Walter Scott Gearhart, B. S. in C. E.	Highway Engr., Agricultural College Ext. Dept.
Geo. S. Hine, B. S. A.	Dairying, Farmers' Institute Department
W. B. Walker, B. S. in C. E.	Drainage Engineer, Farmers' Institute Department
Ada Rice, B. S.	Instructor in English
Ella Weeks, A. B.	Instructor in Drawing and in Color and Design
Daisy Dorothy Zeininger, A. B.	Instructor in Mathematics
Leland David Bushnell, B. S.	Instructor in Bacteriology
Michael Francis Ahearn, B. S.	Instructor in Horticulture
Burton Ray Rogers, D. V. M.	Instructor in Veterinary Science
Kirk Harold Logan, A. B.	Instructor in Physics
Ina Foote Cowles, B. S.	Instructor in Domestic Art
Gertrude Stump, B. S.	Instructor in Domestic Art
Annette Leonard, A. B.	Instructor in English
William Leonard House	Instructor in Woodwork, Foreman of Carpenter Shop
Ambrose Elliot Ridenour, B. S.	Instructor in Moulding, Foreman of Foundry
Jeremiah Haffer Hollar	Instructor in Forging, Foreman of Blacksmith Shop
Raymond Garfield Taylor, A. B.	Instructor in History and Civics
Leonard Marion Peairs, M. S.	Instructor in Entomology
Robert Kirkland Nabours, Ed. B.	Instructor in Geology
Ina Emma Holroyd, B. S.	Assistant in Mathematics
Amanda Katharin Tinkey	Assistant Librarian
Earl Nathaniel Rodell, B. S.	Assistant in Printing
Charles Yost	Foreman of Boiler Room
John Thompson Parker	Assistant in Woodwork
Edgar George Meinzer, A. M.	Assistant in German
Hugh Oliver	Assistant in Heat and Power Department
Charlaine Furley, A. B.	Assistant in English
Jessie Annaberta Reynolds, A. B.	Assistant in History
William Carl Lane, B. S.	Assistant in Electrical Engineering
Flora Cornelia Knight, A. B.	Assistant in History
Margaret Anna Mack	Assistant in History and Civics
Chester Allen Arthur Utt, M. S.	Assistant in Food Analysis
James Arthur Milham, B. S.	Asst. in Animal Husbandry, Ft. Hays Branch Agr. Exp. Sta.
Anna Wilkinson Gordon, A. B.	Assistant in History
Samuel Wilson McGarrah, A. M.	Assistant in Mathematics
Harrison Elazer Porter, B. S.	Assistant in Mathematics
John Bernard Parker, A. M.	Assistant Entomologist
Claude Carroll Cunningham, B. S.	Agronomist Ft. Hays Branch Agr. Exp. Station
Fred Montreville Hayes, D. V. M.	Assistant in Veterinary Medicine
Bertha Lillias Donaldson	Assistant in Domestic Art
Christian Jensen	Asst. State Forester, Ft. Hays Branch Agricultural Experiment Station
Hiram R. Reed, B. S.	Superintendent Garden City Coöperative Experiment Station
Burton Sylvester Orr, B. S.	Assistant in Power and Experimental Engineering
Elmer Johnson, B. S.	Assistant in Power and Experimental Engineering
Elizabeth Wilson Putnam	Assistant in Drawing
Jules Cool Cunningham, B. S.	Assistant in Horticulture
Annie Elsie Lindsey	Assistant in Domestic Science
Raymond Clifford Wiley, B. S.	Assistant in Chemistry
Thomas Powell Haslam, B. S.	Assistant in Veterinary Science, Agr. Exp. Sta.
Amy Alena Allen, B. S.	Assistant in Printing
Porter Joseph Newman, B. S.	Assistant in Chemistry
Clarence Ward Nash, B. S.	Assistant in Crops
Charles James T. Doryland, B. S.	Assistant in Soils

Helen Knostman Huse, B. S.	Assistant in Domestic Science
Edison Frank Kubin, D. V. M.	Assistant in Veterinary Medicine
Atsushi Miyawaki, M. S.	Assistant in Experimental Dairying
Ethel Byerly,	Assistant in Domestic Art
Thomas George Patterson, B. S. A	Assistant in Animal Husbandry
Jessie Gulick.	Assistant Librarian
Mary Mudge, B. S.	Assistant in Library
Estella May Boot, A. M.	Assistant in English
James Russell Jenness, B. S.	Assistant in Physics
Ada Marie Baum.	Assistant in Music
Ethel Kate May Ping	Assistant in Music
Everett Parker Johnston, A. B.	Assistant in Public Speaking
Dean Humboldt Rose, A. M.	Assistant in Botany
Madge Kay, B. S.	Assistant in Mathematics
Don Olmsted Stone, C. E.	Assistant in Civil Engineering
Paul Weidemeyer Graff, B. S.	Assistant in Botany
Turner R. H. Wright, B. S. A.	Assistant in Animal Husbandry
Alfred Everett White, M. S.	Assistant in Mathematics
Charlotte Augusta Morton, B. S.	Assistant in Drawing
Frank Clyde Harris, B. S.	Assistant in Architecture and Drawing
James Henry Burt, V. S.	Assistant in Veterinary Medicine
Florence Warner, A. B.	Cataloguer in Library
John Willard Calvin, B. S.	Assistant in Animal Nutrition
Carl Fred Chase, B. S.	Assistant in Agronomy
Ella Frances Miles	Assistant in Domestic Science
Alanson L. Hallsted, B. S.	Asst. in Dry Farming in Coöp. with U. S. Dept. of Agriculture
Floyd E. Wilson, B. S.	Assistant in Heat and Power
A. L. Harris	Assistant in Heat and Power
B. F. Howenstine	Assistant in Heat and Power
Walter W. Carlson, B. S.	Foreman Machine Shop
Thornton Hayes	Assistant in Machine Shop
Charles Jablow, M. E.	Assistant in Machine Design
Geo. E. Wallis, S. B.	Assistant in Experimental Engineering
Josiah Simson Hughes, M. A.	Assistant in Chemistry
Charles Ernest Millar, B. S.	Assistant in Chemistry
Charles Henry Clevenger, S. M.	Assistant in Mathematics
Arthur Roy Fehn, Ph. B.	Assistant in Mathematics
William Timothy Stratton, A. B.	Assistant in Mathematics
Ada A. Noyes, B. S.	Assistant in Domestic Science
Stella May Stephens, B. S.	Assistant in Domestic Science
Laura Boynton Storms, B. S. in D. E.	Assistant in Domestic Science
Jennie Agnes Humphrey	Assistant in Domestic Science
Nelson A. Crawford, Jr., A. B.	Assistant in English
Edwin George Schafer, B. S.	Assistant in Agronomy
Edwin F. Miller	Assistant in Botany
George K. Link	Assistant in Botany
T. E. Schreiner	Assistant in Dairy Husbandry
A. W. Rudnick	Assistant in Dairy Husbandry
Freeman S. Jacoby	Assistant in Poultry Husbandry
George E. Raburn	Assistant in Physics
Clare Biddison, B. S.	Assistant in Music
George August Westphalinger, Chief Musician U. S. Army (retired)	Band Leader
Margaret Anna Butterfield	Secretary
William Riley Lewis	Custodian
Francis John Turner	Foreman Ogallah Branch Forestry Station
Edward Claeren, Commissary Sergeant. U. S. Army (retired)	Assistant to the Commandant
Alexander Edgar	Herdsmen
Aaron Purdy	Dairy Herdsman

THE INDUSTRIALIST

VOL. 37.

MANHATTAN, KAN., OCTOBER 1, 1910.

No. 1

Another Term Begins.

Ever since colleges began to teach and ever since convocations became the rule, students have received only kind words and good advice from faculties. Undoubtedly these encouraging words have done much to prepare young men and young women for the serious problems and duties of life. The chief hope in these late years, on the part of college presidents and other speakers, has been to say something that should point the way for students, show them that they are approaching that stage in life when each must start for himself, and yet so to brighten their timely council that the student's sustained interest may be held.

In the convocation, Thursday morning, September 22, President Waters greeted the student body as a friend, setting aside the supposed barrier between the students and the head of the college, and inviting all of them to come to him not only when advice and help were needed, but to become acquainted. President Waters emphasized this point: that no man or woman ever fully succeeded in life who traveled alone or unadvised by others. Friendly council from those competent to give it, he said, was far more valuable and important than any one supposed.

Dr. C. M. Brink, dean of the college, read the story of the Prodigal son, using the text as the basis for the general application that the absent sons and daughters from the homes throughout the State should profitably employ their time and lay now the foundation for the coming years of usefulness.

Dr. J. T. Willard, dean of science, spoke on "Preparedness." This word, Doctor Willard believed, came into general use through Theodore Roosevelt's efforts. It was, he said, a strong and important word, worthy the careful consideration of every student in the land.

Mrs. Mary VanZile, dean of women, spoke entertainingly and cheerfully of the environment that will give physical and spiritual development to young people. The students were cautioned by Mrs. VanZile to be careful about forming friendships in their col-

lege years; to go slowly and not to err in the first freedom from home restraint.

Following Mrs. VanZile, Doctor Brink spoke of the importance of getting a right start. A coach, he said, always gave particular attention to the working out of his men. It was Samuel Johnson, Doctor Brink said, who once declared that it did not matter whether a man went east or west, he was almost certain to arrive at the same place sooner or later. "But," said Doctor Brink, "I imagine it would be a long trip to reach the Domestic Science building on the west if one should start east. There would be oceans to cross and lands to traverse."

E. H. Webster, dean of agriculture, urged the students to remember the folks at home who were facing empty chairs that morning, possibly after much self-denial in order that they, the students, might come to College. E. B. McCormick, dean of mechanic arts, being absent from Manhattan, that division was represented by Prof. B. F. Eyer. The durable satisfactions of life, Professor Eyer said, come not so much in doing things as in how you do them and how much you enjoy the doing. The people expect the students to leave the Kansas State Agricultural College able to do things, and therefore it was proper and necessary that they should face their studies cheerfully and find in them the joy of doing and the satisfaction of doing them right.

Before calling upon Dr. Samuel Garvin, of Kansas City, Kan., the principal speaker of the morning, President Waters asked for the college yell, and it was given with a vigor and enthusiasm somewhat startling to visitors and certainly encouraging to the Faculty.

Doctor Garvin's address was that sort in which young people find especial entertainment and instruction. Along with the sound philosophy of it, drawn from a well-stored mind, were many stories, interesting and humorous and particularly apt.

"We do not so much need to concern ourselves about the laws," said Doctor Garvin, "as with the men who administer the laws. The chief factor of every institution in this country is the personnel of its leadership. We do not live under a government of laws, we live under a government of men and newspapers. Nowhere to-day is there such an ebullition of thought as in Kansas, and this year that thought is exceedingly progressive, particularly in politics."

Away back yonder, Doctor Garvin said, perhaps before he was born, God put into every man a commission to do something, and the sooner a man found this commission and set to work, the better for himself and the world. Every man and every woman must

choose for himself and herself the path to be followed through life. Two sorts of persons he always considered candidates for the asylum for the insane: the man that chooses an occupation for his son and the mother that chooses a husband for her daughter. It did not matter, he said, whether a man be a "pill peddler or a pulpit pounder," he should work with all his might for the best there was in him.

Doctor Garvin was not sure that he favored special occupations for young women. He had read a story in the Bible of certain wise young women and certain foolish young women, all of whom were engaged in the commendable occupation of waiting for the coming of the bridegroom. He was strongly in favor of the domestic science course, he said, and—pointing to the Domestic Science and Art building—he believed the quickest road to domestic happiness ran through that structure.

Doctor Garvin was frequently applauded throughout his address of forty-five minutes.

The New Course in Industrial Journalism.

It may not be known generally that more papers are printed to-day in the interests of agriculture and its allied branches than any other profession. More than two thousand persons in the United States are employed in preparing these publications for the press. This means that in this branch of human endeavor there is a wealth of opportunity. There are not enough books in the libraries, presses do not print enough papers to tell the world all it is eager to learn of farming and other great interests upon which the public depends for its sustenance. The college can not make enough agricultural or industrial experts to keep this curious world informed; the farming papers are eager for contributions, for intelligently written articles, for letters from men from farm and shop which shall tell their readers what the world desires to know, and, in the telling, emphasize the dignity of labor and the possibility of combining work of the head and hands in one profession.

In opening, this term, a Department of Industrial Journalism, the Kansas State Agricultural College hopes to do important service in supplying this increasing demand for information. Primarily it is the intention to teach students to write English acceptable to industrial publications, and to write entertainingly of subjects that, ordinarily, are prosaic only because of heavy treatment; subjects that, with common regard for brevity and brightness, may be filled with human interest of surpassing attractiveness.

The demand for this kind of reading is growing daily. The difficulty of supplying it was emphasized by every one of thirty editors of farm and trade papers in Chicago who were visited this month by Prof. Charles Dillon, who is to have charge of the new department. The announcement that the Kansas State Agricultural College was to do something toward ameliorating these conditions was received with much satisfaction. The editors of two leading publications were so interested that they at once expressed



Charles Dillon.

their intention of offering attractive awards for contributions from Kansas students, and requested to be kept informed of the new school's progress.

This does not mean that the Kansas State Agricultural College expects or desires to make editors offhand. It hopes to send young men and young women back to the farms and towns and small cities where they are so imperatively needed. It desires nothing more satisfying than to return its students to the land mentally equipped to tell what the land, scientifically managed, will produce. This is its chief object, but it also hopes to educate these students to conduct "country papers." This designation is used only to distinguish the rural press from that of the cities or metropolitan papers. The influence of both, when properly di-

rected, is powerful; no man or woman can participate in a business more honorable or more certain in its rewards. On it rests the mighty duty of conveying to the world the news of what the world is doing, of disseminating popular information, and of improving, by apt suggestion, the whole system of living in the town and country by making people think. Without the newspapers, the farm and trade publications, the value of the colleges would be greatly lessened, and communication between communities would be reduced to a minimum.

The course in journalism, provided by the foresight of President Waters and the Board of Regents, opens to the young men of Kansas a field of exceptional usefulness. To those who demonstrate their fitness, the opportunities are many and attractive, but it is a calling in which only the live, industrious and ambitious will win.

The course in journalism is elective in the junior and senior years, and can be taken with other courses. Coöperating particularly with the Departments of Printing, English and Agricultural Extension, the School of Industrial Journalism presents an educational combination of much importance in the college curriculum.

This department of writing has been largely neglected by the young women of the State. The girl or woman that can write interestingly, especially of domestic science and art, will not long be idle should employment be desired. But even if she write only from her own home, her work will be equal in importance, and in some respects surpass, that done by women in almost any other branch of human activity. The woman that writes to improve home living is doing a fine thing for humanity—something as fine and important as that done by the man who increases the yield of an acre or improves a breed of cattle or horses. One means a race of better men, and better homes. The other means more homes and better comforts in them.

It had been hoped to enlarge the INDUSTRIALIST with the opening of the present term, but this change, it has been decided, will be delayed for a few weeks.

H. M. Cottrell, '84, commissioner of agriculture for the Chicago, Rock Island & Pacific railroad, spent a few days in Manhattan last week. He was on a trip through thirteen states arranging his work with the several boards of agriculture and experiment stations. He travels in his private car. While here he entertained for supper in his car Mrs. E. H. Bowen, Mrs. Phoebe H. McKeen, and Watson D. Haines.

Driving Out the Chinch-bugs.

Can the farmers of Kansas, by following the advice of experts, rid the state of chinch-bugs? T. J. Headlee, professor of entomology at the Kansas State Agricultural College, who knows as much or more than any one else of these pests and their history, says the farmers can do it. Contrary to the accepted idea of the general public, the chinch-bugs are said to have done more damage this year to corn than to wheat. This is because the small brood appears first in the spring wheat and later in the summer changes its habitation and activities to the adjoining corn fields. No one knows exactly what damage has been done to the corn and wheat, but it is accepted as a fact among those who have studied the situation carefully, that the corn received the brunt of the attack.

In the last two summers the chinch-bugs have done large damage to corn throughout the central part of the state from north to south, especially that part devoted to wheat and corn. This, investigation shows, is because growing the two grains together is conducive to every condition suitable to the growth of the chinch-bug. The damage became progressively heavier in both years, 1909 and 1910, as the investigation proceeded from north to south, most damage being in the central counties. A condition that caused much damage to corn in the central part of the state this year was due to listing many wheat fields to corn. This listing became necessary when wheat failed and corn took its place.

The Kansas State Agricultural College through its Department of Entomology, has done about everything that a college could do in helping to drive out the chinch-bugs, Hessian fly and other insects. Professor Headlee and his assistants have given clear and concise lectures and directions to the farmers; press bulletins and pamphlets have been issued at the expense of the state, describing methods of destroying these insects, such directions applying to winter and summer treatment. One or two men have been kept in the field always in the worst parts of the infested districts. This was done from before harvest last year to the present. The man so assigned traveled almost continually from one part to the other of the section where his services were needed. For instance, this agent spent several months last winter working against chinch-bugs on farms in Sumner county; and, during the passing of the bugs from the wheat fields to the adjoining corn fields this summer, experimenting and demonstrating chiefly in Harper county.

It is planned to take a large farm in one township and a second

area of several square miles in a badly infested district, and by every practicable means known try to prevent these areas from suffering next season from the chinch-bug and to discover if, from measures now known and to be devised, the farmers by working together can prevent chinch-bug damage to crops.

Professor Headlee intends to kill chinch-bugs this winter by burning them in their winter quarters. Those that the fire does not destroy will, he believes, die by exposure to the weather. By this method it is believed that the passing of the chinch-bug from one field to the other will be prevented.

There are experts who insist that common action by the farmers for cleanliness in fields and buildings and along the roadways and the prompt burning of wheat straw and corn stalks, unless used by the farmers for other purposes, would in a short time completely eradicate the chinch-bug. One dirty farm, it is said, can infest an entire county, and that means the state.

At Hays, where the state has 3500 acres, burning will begin next month in the area attacked by the chinch-bug.

Why a Soil Survey?

Why should a farmer spend the best years of his life trying to cultivate soil on which nothing can be produced?

Why not know in the beginning whether the soil is best adapted to wheat or corn or brick making?

What do the farmers know of soil surveys? How many farmers know what is in the soil of their farms, what it will grow and why it fails to grow, when it does fail? Farmers have been known to drag along for years on unproductive soils, needing only one addition that might have been provided by the agency of a soil survey.

The material wealth of a country is thought of in terms of gold, silver and copper. Much is heard of our wonderful mining industries.

But more wealth was taken from the soil last year than has been taken from the gold mines of North America since it was discovered by Columbus.

The plant-food in the soil is the farmer's gold. His future depends upon how he mines it. And well-mined soil will continue indefinitely. If wastefully operated, it soon will be exhausted.

Geographical surveys are common. Water surveys are understood by most persons; doubtless for years the farmers have known of soil surveys but only recently has much consideration been given them by those to whom they are of utmost importance.

The soil survey is the means for the farmer to take stock; it is his chief asset. By its work he knows how long his soil will last; if he can turn it over to his children for their benefit or whether it will soon wear out. The survey will show him, also, how so to farm it that he may conserve its valuable materials, and how to fertilize it to supplement the stock of plant-food it contains. Nothing can be more important than this.

The time to know what is in the soil is in the beginning, not when a man is too poor to avail himself of the new knowledge. A farmer can do little to benefit himself when repeated crop failures have loaded his farm with mortgages. The way to get large crops, the way properly to rotate these crops, the whole mystery, in other words, of soil fertility is wrapped up in soil survey. Hardly any other work done by the Kansas State Agricultural College is more important to the farmers of the state. Every farmer who meets an expert from the college—and they are constantly in the field—should welcome him as an agent of good. This agent visits the leading farmers in certain districts and from them learns in outline the local conditions.

For instance, in the western part of a county the farms show a light sandy soil; in the eastern part is a gumbo; up there in the north it is black, and down here in the south is a gravel formation. The agent visits the county surveyor. The plat books are examined. Every one in the county likely to have information of value is questioned. As he goes along the road, the agent watches the soil and the crops, the houses and the barns. He has a four-inch auger and, where the circumstances warrant it, makes at least five or six borings in the farmers' fields. The first goes down about seven inches, the second from seven to twenty inches, and the third from twenty to forty inches. These samples are put in sacks, numbered and the number recorded with the agent's notes describing the soil, its texture, color and other peculiarities; notes of agricultural conditions in general, the methods of farming, etc., the whole forming a record of inestimable value to the citizens of the state, now and in the future.

While the summer journeys through the country are very interesting, it is the work done in the laboratories of the Kansas State Agricultural College that stands out as of extra importance. Every sample of the soil taken is analyzed by a competent person, to whom every particle means something. The totals of potassium, phosphorus, nitrogen, carbon and carbonates, and acidity are entered in the books. These show the potential fertility of the soil, and are, in fact, the evidence for which the survey was made.

It is important to know what a soil will grow and why it will not grow certain crops. Furthermore, the tests and experiments are of especial value as exhibits for the college classes, because there a boy may see soil from his own home county or his father's farm, the farm he, some day, may own and operate. It is, certainly, of interest to him to know what that soil contains and what it will grow. His studies in college and all that he does after leaving college are very likely to be determined by the analysis of the soil taken from his own neighborhood.

Prof. Swanson, of the department of chemistry, and his aides, have carried on soil surveys in these counties: Labette, Cherokee, Allen, Sedgwick, Jefferson, Russell, Brown, Doniphan, Riley, Greenwood, Harper, and Ellis. The United States Bureau of Soils already had surveyed Labette, Allen, Brown, Riley, Sedgwick and Russell Counties when the college began its investigations.

In Riley County, for instance, there are eight soils, two of residual origin, five alluvial and one of water-deposited material, a formation called "loess." The most important residual soil, Oswego silt loam, is found on the high plateau or prairie, at an elevation of 1,250 to 1,400 feet. The soil is derived by weathering, principally from the underlying shales. The loessial soil, Marshall silt loam, is derived from the material formed by the deposition of transported soil from the deflected waters of the glacier, and is found not more than 1200 feet above the sea level, in the lower slopes of the valleys and on the low, rolling uplands. It probably constitutes the greater part of the creek bottoms and has been thinly covered with recent alluvial wash from the surrounding hills.

Oswego silt loam consists of a rather heavy silt loam varying in color from dark brown, under ordinary moisture conditions, to black when wet. This soil is remarkably uniform in color and texture and is entirely free from stones, except on some of the narrower slopes at the edge of the valleys where it joins the Rough stony land. The Laurel fine sandy loam is a type of soil that has very little uniformity in texture. It consists of quantities of sand and silt that have been washed together by floods and mixed in varying proportions. The type is in the bottoms of the Kansas, Big Blue and Republican Rivers. The largest areas are in the Kansas River bottoms near Manhattan. Smaller areas of the type are found in the Big Blue River bottoms, usually inside of the larger bends.

The Laurel fine sandy loam lies in a nearly level position. Areas

that have been washed by the overflow waters and blown about by the wind give the type an uneven and irregular surface in places. Surface drainage is fairly good, and the loose texture of the soil and subsoil allows a ready downward percolation of water, so that the type does not require artificial drainage.

The Laurel fine sandy loam is an alluvial soil that owes its origin to the deposition of transported sand and silt from rather freely flowing water. The process is continued during the infrequent floods which occur in these rivers. The last flood, in 1903, formed considerable of this soil by depositing the sandy material on what was at that time Laurel silt loam. These sandy deposits were made to a depth of from a few inches to several feet and little uniformity is to be found in the soil section.

The greater part of the soil is cultivated, but where uncultivated there is a natural forest growth of cottonwood, elm, walnut, etc. The lighter phase is especially adapted to melons, sweet potatoes and other vine crops. The heavier phase, especially where the subsoil is a black or brown silt, is especially adapted to corn and Irish potatoes. The type as a whole is a good truck soil.

The crops grown at present are corn, alfalfa, potatoes, melons and vegetables, together with smaller quantities of wheat, oats, Kafir-corn, and sorghum. In the vicinity of Manhattan considerable trucking is done. The crops grown for local market and for shipment consist of sweet potatoes, melons, Irish potatoes, and smaller quantities of other vegetables.

Corn yields at the rate of 25 to 50 bushels, alfalfa from $2\frac{1}{2}$ to 4 tons, wheat from 15 to 20 bushels, oats from 25 to 40 bushels, Irish potatoes from 75 to 150 bushels, and sweet potatoes from 75 to 200 bushels an acre. Apples, pears, peaches, plums, cherries, grapes and berries do well on this soil. Melons and cantaloups also do well and are grown to a considerable extent.

This land is a good truck soil, but needs plenty of rain for the best results, as it dries out quickly. It is not naturally a very strong soil, and for general farming it soon deteriorates if not cultivated carefully. No fertilizer and little manure of any kind is used. This type is not a favorite with the farmer who wishes to grow grain, but in the vicinity of railroads and towns, where it is used for trucking, it is valued quite highly, being held at from \$50 to \$75 an acre.

Soil surveys give all this information. Such work determines just what soil may be expected to produce and how it should be treated if lacking in needed properties. It is one of the big and important works of the Agricultural College.

Local Notes.

Miss Talmage Solt, a former student, is assisting in Varney's bookstore this week.

Chas. M. Vernon, editor of the *Manhattan Daily Mercury*, was a college visitor Wednesday.

W. S. Gearhart, highway engineer, extension department, K. S. A. C., left Tuesday for Pueblo to attend the Irrigation Congress.

Henry W. McFadden, of Halls Summit, Kansas, arrived Tuesday to resume his college work. He is rooming at the Y. M. C. A. building.

Miss Matah Schaeffer returned Sunday from Atchison, Kansas, where she has been teaching domestic science in the State Orphans' Home, for another year of work in the domestic science department.

Prof. Dean left Wednesday on a trip through the eastern states. He will study the grain shipping methods in Chicago, Buffalo, New York, Philadelphia and other eastern cities. He will return in about three weeks.

J. D. Rickman, superintendent of the printing plant, has been invited to address the State Press Association in February. Mr. Rickman will speak of "Industrial Education," with particular reference to the practical side of printing.

E. H. Webster, dean of agriculture, and Wm. Jardine, professor of agronomy, have gone to Pueblo, Col., to attend the Irrigation Congress. They are to go, at the close of the congress, to Spokane, Wash., for the Dry Farming Congress.

A gold pin found in Maxine Elliott's theater, New York, has been sent to the college by the manager, George J. Appleton. The pin is in the office of the department of industrial journalism. It will be returned to the owner upon proper identification.

Those that remember the early graduates of K. S. A. C. will call to mind the members of the class of 1871, of whom only five can now be accounted for. Two of this number were Charles O. Whedon and Ellen F. Denison, the daughter of President Denison. Later these two were married and for thirty-five years have lived in Lincoln, Neb. Friends in Manhattan received word last summer that Mrs. Whedon had died in New York where she had gone for medical treatment. Mrs. Whedon had many friends in Manhattan.

The Agricultural College began last May an investigation of the so-called semi-arid regions of western Kansas, the purpose being to learn the actual conditions under which farmers were cultivating their farms when too far from rivers or creeks to obtain water for irrigation. This investigation resulted in encouraging the use of pumping plants operated by gasoline and gas engines. Where the farmers do not understand the operating of these engines, the Agricultural College sends experts to help them, who direct the installing of the pumping plants and teach the farmers how to care for them.

Alumni and Former Students.

Elizabeth (Finlayson) Zuck, '04, spent a few hours in Manhattan recently.

Born, September 28, to Mr. and Mrs. T. W. Buell, both of the '04 class, a son.

Fred G. Kimball, '87, and Miss Mary Marlatt were married September 24. They will live in Manhattan.

J. M. Westgate, '02, an alfalfa specialist with the U. S. Department of Agriculture, was a campus visitor Wednesday.

The domestic art department is so busy this fall that Jennie (Ridenour) Orr, '04, is assisting in the work of teaching classes.

Miss Virginia Meade, '09, took advanced work in domestic science this summer at Columbia University. She will teach in the Topeka high school this term.

Miss Elizabeth Dickens received, this week, a large box of California grapes, the annual gift of Isaac Jones, '94, Etiwanda, Cal. Mr. Jones is now studying law at San Bernardino, Cal.

D. E. Lewis, '10, left for Parker Wednesday to finish the college fruit demonstration work there and at other points. He will return in about four weeks and enter college and take postgraduate work along horticultural lines.

Married, June 30, at Summerfield, Kan., Stella May Finlayson, '07, for last two years a teacher in the grades schools of Tulsa, Ok., and Geo. C. Gardner, a student in 1903-'04, now a civil engineer employed by the Puget Sound Mill and Lumber Company, of Port Crescent, Wash.

Harry M. Bainer, of the "naughty-naught" class, has resigned as professor of farm mechanics and dairying in the Colorado Agricultural College to take a position with the Atchison, Topeka & Santa Fé railway as agricultural demonstrator. His headquarters is at Amarillo, Texas.

Edward A. Morgan, K. S. A. C. '07, has been appointed "expert farmer" in the Indian service at Vinita, Okla. This is a civil service position requiring an examination in which the competition is keen. Only graduates of agricultural colleges can pass, because of the knowledge required.

Miss Margaret Haggart, '05, will be an instructor in dietetics in the hospital department of Johns Hopkins University this year. She has been a teacher in the domestic science department of the New Mexico Agricultural College for the four years since her graduation in the K. S. A. C.

Mrs. Henrietta Calvin, '86, at the head of the domestic science department of Purdue University, who formerly held a similar position at K. S. A. C., has started the first short course of domestic science held in Indiana. The course founded by Mrs. Calvin is similar to that offered at this college.

THE
INDUSTRIALIST

Vol. 37

Saturday, October 8, 1910

No. 2

Issued Weekly By
Kansas State Agricultural College
Manhattan, Kansas



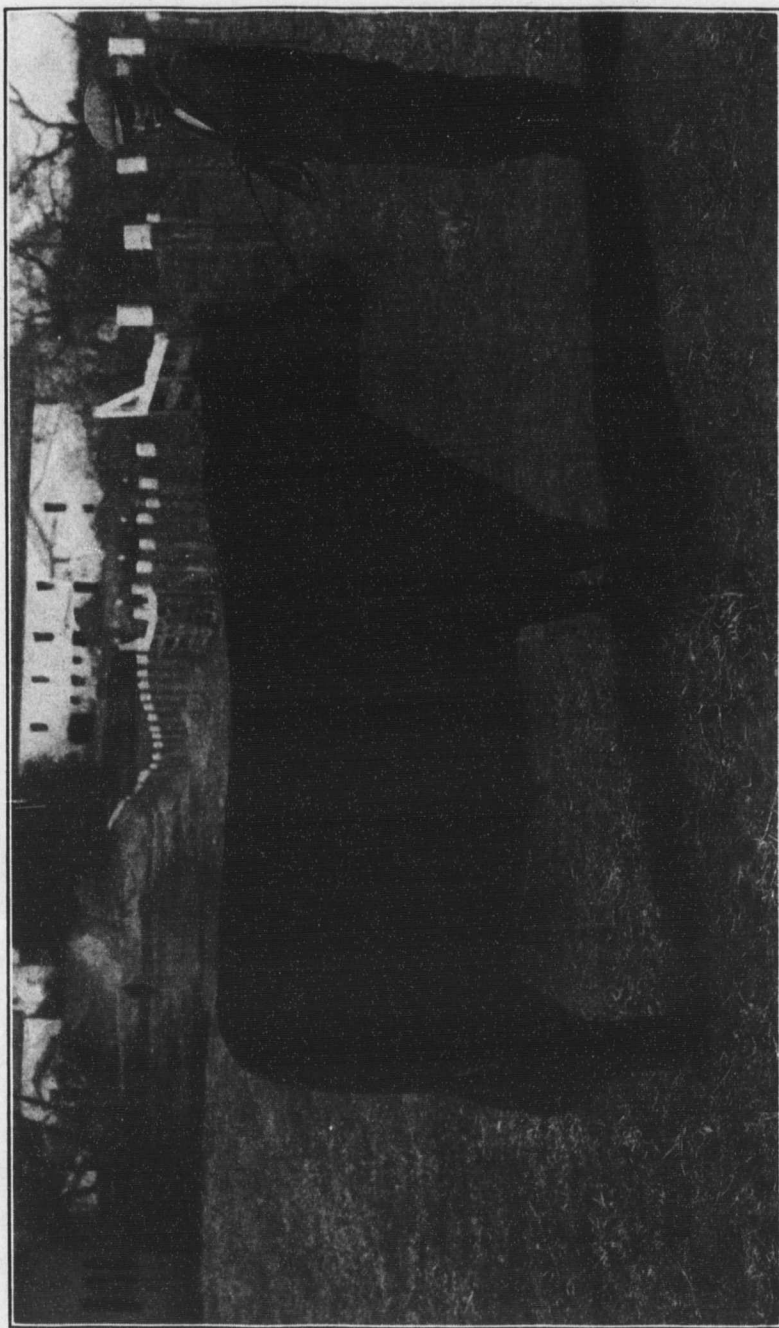
STAFF

Pres. H. J. Waters, Editor-in-Chief
Prof. C. J. Dillon, Managing Editor
Dr. J. D. Walters, Local Editor
Dr. J. T. Willard, Alumni Editor

~~~~~  
*Published by*  
**PRINTING DEPARTMENT**  
*J. D. Rickman, Supt.*

Entered at post-office, Manhattan, Kan., as second-class matter. Act of July 16, 1894.





Symboleer, K. S. A. C., Angus steer, winner of the championship in the Interstate Fat Stock Show at St. Joseph.

# THE INDUSTRIALIST

VOL. 37.

MANHATTAN, KAN., OCTOBER 8, 1910.

No. 2

## *Why the Rural Decrease?*

The startling decrease in the rural population of Missouri, Michigan, Iowa and the other agricultural states is due, primarily, to these conditions, in the opinion of Henry J. Waters, president of the Kansas State Agricultural College:

America is drifting toward the stupendous blunder of Great Britain in creating a land-owning class to be supported by tenants.

Unless checked—and President Waters suggests a remedy—this will retard the improving of rural conditions, in which is included better homes, better schools, and a more comprehensive system of rural education; prevent road building and seriously discourage the scientific cultivation of restricted areas from which would come increased yields.

The cost of living must be reduced by improved methods of production rather than by reduced profits to the producer.

“The decrease in rural population in the states referred to,” President Waters said, “is due, mainly, to emigration to Oklahoma, Texas, Canada, etc., and to the fact that so many farmers of the states affected have moved to town to enjoy the better social, educational and religious advantages than are afforded in the country.

“To those that have kept in close touch with the agricultural situation this decrease in rural population is not surprising. We have seen our agricultural exports decline rapidly within the last five years, and the price of food stuffs rise steadily, despite good crop yields, the country over. Months ago it was pointed out that this could be due to no other cause than that too few people were on farms, and too large a proportion of our total population was in cities and towns.

“Of course, this condition of affairs is temporary, and will soon correct itself. It is exceedingly important, however, that we give careful attention to the fundamental causes for this exodus from



the farm to the city, and employ the proper means for correcting it at this time and for preventing its recurrence in future.

#### THE CONSUMER'S INTEREST.

"It does not so vitally concern the agricultural population as it concerns the consuming public in general, for so long as there is a shortage of producers and a surplus of consumers prices are bound to be satisfactory to the producer and unsatisfactory to the consumer.

"Agricultural practices must be improved so the farmer may derive a reasonable profit at the same time that he sells his products to the consumer at prices that he can afford to pay. The cost of living must be reduced by improved methods of production, rather than by reduced profits to the producer.

"On the surface, the reason for so many people leaving the farm in Missouri, Iowa, etc., is that land has risen in price rapidly in the corn belt within the last five years. This has forced the man of small capital who wanted to buy a rural home to leave this region and go into Oklahoma, Texas, Western Kansas, or Canada, where land values were lower.

"The man that owned the land suddenly found his property valuable beyond his dreams, and was immediately tempted to cash in, so to speak. He well knew that at the prices for farm products to which he had been accustomed, and under the system of farming with which he was familiar, his land would not yield a reasonable return upon the money for which he could sell it. In other instances there was awakened in the owner a desire to exchange his limited acres of high-priced land for a larger holding of cheap land in the west or south, in the hope of reaping a benefit of a rapid and decisive rise in its value such as had occurred in his smaller holding. In many instances the farmer had, in the era of good crops and satisfactory prices, accumulated a surplus fund with which he bought out his neighboring farmer and thus doubled his land holdings, his neighbor moving to town or to some other state, his house in many cases remaining vacant.

#### HIS DAY OF WEALTH.

"In a still larger number of cases the farmer found himself suddenly wealthy enough, under the new regime of land values, to live in comfort in the county-seat town or in the city, and give to his family advantages which the country had not afforded. Many young men hesitated to engage in farming with land selling at \$100 an acre who, with land worth \$25 an acre, would have chosen agriculture as a business. In short, the high price of land, the fear

that it might decrease in value, and the conviction that it would not further increase in value, has forced many young men into other professions who would otherwise have become farmers. Much of our best agricultural land has passed into the hands of capitalists and city and town business men. On farms where formerly lived the owner, now lives a tenant.

"The real reason, however, for this exodus from the farm must be sought in the condition of rural life itself. If the people generally believed that country life possessed the business opportunities and attractiveness of town and city life, there would be plenty of people to take the place of those who left the country for the other states or for the town. If the schools, churches, roads, social and home conveniences had reached the same development in the country as in the city, there would not be complaint of lack of sufficient people on the farm.

"Added to this situation is the extremely unfortunate fact that the difference between city and country life in these respects is greatly exaggerated in the public mind. The people of the country largely over-estimate the advantages of city life, and fail correctly to comprehend its disadvantages until it is too late to change their condition, while the people of the city enormously exaggerate the difficulties and drudgery of country life, and fail to appreciate its great and peculiar advantages.

"This trend cityward is to a great degree due to the half education that has prevailed in the rural districts, giving farm boys and girls glimpses of a more attractive city life, without teaching them at the same time how they may attain such a life at home."

#### HERE'S THE REMEDY.

The important thing to be decided, President Waters concludes, is this: How to keep young men and young women on the farms so that the average intelligence of the farming community may not be lowered. The remedy, he believes, will be to improve the rural school, erect within riding distance of the home of every boy and girl in the rural districts a first-class high school in which agriculture, manual training and home economics are taught, the rural church must be strengthened, developed and redirected, and the country road must be made passable in comfort the year through.

"We do not need additional emigration to this country of the class we have been getting in the past," President Waters said. "We do need emigrants of the sort that we may profitably put on our farms. This means they must be intelligent, well educated, have



capital, and the sort of experience that will keep them in sympathy with country life and enable them quickly to adopt the American viewpoint and the American methods. It should be kept in mind that the foreigner is Americanized more slowly in the country than in the city, and the wrong sort is a far greater menace to society when in the open country than in the closely guarded city.

"To attract such emigrants would mean to establish offices in different parts of the country, to induce the right sort of people to come here and actively to discourage the wrong sort from emigrating to America. Care would, of course, need to be exercised in directing these people to that part of the country where they would be most likely to succeed. For example, a different farmer should be selected for the Ozark region of Missouri from that of the short-grass country of Kansas. The several states and the federal government might profitably coöperate in this important enterprise. Emigrants should be selected on the continent of Europe rather than in Castle Garden, New York."

---

### *The New Dairy Head.*

"Pailing a cow" is disagreeable work and the Kansas farmer doesn't like it. And more than that, he would resent any such attempt to dignify milking by calling it "pailing." He hates to slide out of a warm bed at about four o'clock in the morning, as most dairymen must, and begin milking. It is decidedly unpleasant, he thinks, happening as it does seven mornings out of every week, and evenings too.

Probably because the farmer does not like this chore, which at all dairies is no small one, dairying in Kansas is not nearly as big an industry as it should be. O. E. Reed, who is in charge of the department of dairying at the Kansas State Agricultural College, believes this is one of the chief reasons but doesn't desire to be understood as saying Kansas farmers are lazy. Indeed, he believes the exact opposite.

Mr. Reed arrived at the College ten days ago. Already he has planned and begun to carry out some things that should make his department useful to dairy interests in the state, and he believes that is what his department is for. He is a graduate of the Missouri school of agriculture. For the last three years he has been associate professor of dairying at Purdue University in Indiana. He is the kind that "does things." At Purdue they tell this story about him: Arriving at Purdue to take up his work he found that

his department had only one silo full of silage—about half enough for the herd. He asked a few questions and learned that the department had money enough to build another silo but that it was thought by his associates too late in the season to build it. The material with which to fill another silo would be gone by the time the silo was completed, they thought. Reed had another idea. He knew the silage would be needed badly, so he telegraphed for



O. E. Reed,  
Assistant Professor of Dairying.

the materials, pushed the construction work and filled the silo as it went up. They had enough silage to last through the winter.

"Yes," he said yesterday. "I should say that if any one thing causes lack of interest in dairying it is the general dislike of having to milk. I hardly think the milking machine will solve the problem. We have tried the milking-machine here and although it might be practicable for a large herd it is not practicable for a small one. And then with the milking machine you cannot get the personal contact with the cow, and that counts for a good deal.

"But there is a remedy, I believe. The people that use butter and milk and cheese will have to pay the dairyman extra for his trouble. The big prices now paid for dairy products should be the remedy. Why, the price of whole milk in Chicago has increased 65 per cent in the last few years. Topeka people are complaining of a 70 per cent increase in whole milk. At the Elgin market, the central market for the Middle West, the price of butter



fat has increased 58 per cent in the same time. Thus, while other food stuffs are increasing from 40 to 50 per cent, dairy products have increased 60 to 70 per cent. That ought to sound good to the dairymen. With such increased prices it is only a matter of time until more farmers will be attracted to dairy farming.

"The ever-increasing cost of land also will help dairying in Kansas. It is not so easy to make beef as it used to be. A dairy cow will, in a year, make more food for humans than a beef cow in the same time and for practically the same amount put in. And then at the end of the year the dairyman still has the machine that did the work.

"The dairy industry is coming west. Kansas is in better condition for the industry than it ever has been. The state has the alfalfa and corn necessary for silage. And the markets are better and closer. Kansas City and St. Joseph on the east, and Pueblo on the west, are all good markets for Kansas dairymen."

The department at the Kansas State Agricultural College desires to build up a first-class dairy herd. To do this it has started an experiment to learn exactly how the dairy cow uses her food and what her nutritive requirements are from birth to maturity. The college now has a herd of about forty cows representing four breeds—Holstein, Jersey, Guernsey, and Ayrshire. By careful breeding and culling it is believed the college will have, within a few years, one of the best dairy herds in the Middle West. The dairy barn has stalls for seventy cows.

As was done last year the department will conduct this year bi-monthly butter-scoring contests at the college, in which all creamery butter makers of the state are eligible to enter. Prizes are offered for the best samples of butter and for the best judges. The contest is in charge of a competent judge, who explains why some samples are better than others, and in other ways gives general information about butter making. The creamery men feel the need of these contests and like to take part in them. An improving of the quality of creamery butter is the result of these contests.

---

Francis B. Milliken has been elected assistant in entomology in the college and station work, to take the place of Harry Evans, recently resigned. Mr. Milliken was graduated from this institution in 1908, and up to his election has been doing graduate work in the entomology department here. In addition to the regular training he has spent two summers in state work, the first in work against the San José scale, and the second in fumigating flouring mills.

***Organized Help for Students. — The Y. M. C. A. and the Y. W. C. A. Give the Proper Tone to College Life.***

The opening of college means turmoil, excitement and work for the college town. The new student must not only be enrolled and assigned to classes; he must also be made welcome and be assisted in finding a room and a boarding club. He must be made to feel at home. This is where the Young Men's and Young Women's Christian Associations enter upon the scene of action.

The two associations at Manhattan, the home of the Kansas State Agricultural College, have been especially busy this year. Every train for a week before the beginning of the college year, and for two days afterward, was met by delegations from both associations. These committees acted as guides, information bureaus, confidential advisers, and even as porters and expressmen in exceptional cases.

The influence for good of the Y. W. C. A. and Y. M. C. A. in the college can hardly be overestimated. The college curriculum is strong on mind development, but does nothing for the student's spiritual nature, nothing, in the case of the majority, for his physical well-being. It is the function of the Y. M. C. A. to provide certain educational advantages not found in the college courses. One of the strongest features of its work, in addition to looking after the spiritual needs of the students, is the training in leadership. The colleges not only have to furnish the trained minds for the country, but must also send out men trained to lead in all movements for the betterment of social and economic conditions in American life. For this purpose the Y. M. C. A. Bible study course for this year offers to upper classmen two especially strong courses in laymen leadership, one of these teaching leadership in agricultural communities.

The two associations are looking forward to a successful year. The Y. W. C. A. has assisted over one hundred girls in getting rooms for the year; has found employment for forty girls who are working their way through college; and expects materially to increase its membership of four hundred and fifty. The association maintains an office for the secretary, Miss Flora Hull, and a rest room for girls in the domestic science building. Miss Gladys Seaton, '11, is president of the association.

The Y. M. C. A. has helped five hundred students to find rooms; obtained employment for one hundred; started enrolment in ten gymnasium classes under the competent instruction of O. C. Thompson; held a two-days Bible study institute, led by Dr. Clayton S. Cooper, of New York, assisted by eight members of



the college Faculty, and has set the membership goal at one thousand.

E. T. Heald, an Oberlin College man, is general secretary, with offices in the Y. M. C. A. building at Eleventh and Fremont streets. M. S. Collins, '12, is president of the association. C. J. S.

---

### ***How the Co-op. Bookstore Grows.***

The growth of the Students' Coöperative Bookstore was described in student assembly a few days ago. In 1900 the store was inventoried at \$300. The business for the year was \$3,000. In 1909 the stock in the store was worth \$5,000, and the business amounted to \$17,000.

Carl Mercer, manager of the store, drew attention to the fact that the students might save from 10 per cent to 45 per cent on the cost of books by buying them at the coöperative store. Students also may obtain work through the employment agency in connection with the store. The students were invited to call there and become acquainted and make the store their general headquarters during their leisure moments.

---

### ***Listen to the Band.***

Are you ready for the band? Judging from the present, the band will be busy this year. Though primarily connected with the Military Department the band always is ready to contribute to student enterprises. One concert is given every year, at Commencement time, and always is a success.

The band practices three times a week and plays, Thursday, for dress parade. All beginners have a tryout and the best men are chosen for the places, as in football.

Eighteen new men have reported for band practice. With many of last year's members back, G. A. Westphalinger, the leader, believes the organization will be much improved.

"We expect to have a much better band this year," Mr. Westphalinger said. "We shall take up a higher class of music, too. As several members of last year's band have reported and a large number of new members are enrolling, we ought to have an excellent band and do more for the school and the student body."

The following applicants have enrolled for practice: *Clarinets*—O. M. Franklin, Ray Williams, W. L. Rhoades, D. G. Parkinson, C. A. Macintosh, H. E. Butcher, C. A. Hutto; *Piccolo*—C. Sumner; *Cornets*—Roy Fritz, C. A. Davis, N. B. Needham, C. C. Walcott,

R. K. Bonnet, J. G. Blunt, H. E. Newhouse, F. B. Ira, B. R. Ellis, Otto Parker, R. L. Barnum, Ray Whitney; *Altos*—Leo Rexroad, H. McNamara, J. W. Bolinger, A. W. Griffith; *Trombones*—E. H. Smies, O. F. McKittrick, C. C. Straub; *Baritones*—W. G. Davis, F. L. Robinson; *Basses*—W. A. Brown, G. H. Peterson; *Drums*—L. Flanders, Burton Williams, G. T. Gillespie.

Mr. Westphalinger has had 32 years experience as a musician. This is his second year at K. S. A. C.

---

### ***Prof. Emch to the U of I.***

Prof. Emch, at one time a member of the faculty of this college, later professor of mathematics at the State University of Colorado, and for the last year or two professor of mathematics at the University of Basel, Switzerland, has accepted a call from the State University of Illinois. Dr. Emch is the author of several modern works on higher mathematics. He is a son-in-law of Dr. Walters of this college.

---

### ***At the Fairs.***

The Kansas State Agricultural College was well represented at the state fair at Hutchinson. R. J. Kinzer, professor of animal husbandry, with T. G. Patterson and T. H. R. Wright, assistants, were there for the stock judging. Mrs. Mary P. Van Zile, dean of women, judged the jellies, jams, cakes, and pies. Miss Antonetta Becker and Miss Gertrude Stump judged the household art display. Albert Dickens, professor of horticulture, awarded the prizes in the horticultural division.

H. A. Pennington, '99, was assistant superintendent of cattle at the fair. A. H. Leidigh, '02, had an excellent exhibit of Hereford cattle, and F. A. Dawley, '95, entered some fine Poland China hogs. W. J. Yoeman, '93, was the breeder of the race horse, Helios, that sold for a high price at the fair. Mr. Yoeman is in charge of the high schools at Sylvia, Kansas. He breeds a few trotters for recreation.

J. L. Pelham, '07, superintendent of the Underwood orchards at Hutchinson, had a creditable exhibit of apples from that orchard arranged by K. C. Manny, '10, assistant field foreman. Miss Grace Berry, '10, now teacher of domestic science in the Reno County high schools at Nickerson, conducted a successful demonstration in biscuit making.

The college people had a meeting while there, attended by a number of former students and undergraduates.



### *The Lecture Course.*

A particularly attractive program of lectures for the college year has been prepared by the committee having this work in charge. Prof. J. E. Kammeyer told the students in assembly a few mornings ago of the exceptionally interesting entertainment to be provided for them. In arranging this program the lecture course committee obligated itself to pay approximately \$2,500. To meet this obligation it is imperative that the students, their friends and parents, if their friends and parents live in Manhattan, buy the course tickets. These tickets cost \$2.00, less than twenty cents a lecture. The whole list follows:

Ferullo Band, Oct. 10; S. H. Clark, Oct. 20; S. H. Clark, Oct. 21; Jack Crawford, Oct. 24; Catherine Ridgeway, Oct. 28; Alpine Singers, Nov. 18; H. Smith McCowan, Dec. 5; Royal Welsh Ladies Choir, Dec. 19; Alton Packard, Jan. 13, General Sweeney, Jan. 28; Dunbar Male Quartet, Feb. 7, Bostonia Sextet Club, Feb. 22; Madison C. Peters, March 9; and E. A. Ott, March 31.

An interesting and very important innovation has been arranged for in connection with the lecture course. This is a detention room, or nursery, for babies or children likely to become restless if compelled to sit in the Auditorium. The Y. M. C. A. will be in charge of this room in the basement of the Auditorium. The babies may be checked there—and do not lose the check.

### *The Enrolment.*

A count of assignments, made by Secretary Butterfield last Thursday, October 6, gave most gratifying results. There were present in class on that day:

|                         | 1910 | 1909 | 1908 |
|-------------------------|------|------|------|
| Graduates .....         | 15   | 8    | 8    |
| Seniors .....           | 228  | 148  | 115  |
| Juniors .....           | 280  | 276  | 133  |
| Sophomores .....        | 372  | 362  | 209  |
| Freshmen.....           | 406  | 392  | 368  |
| Subfreshmen.....        | 322  | 413  | 407  |
| D. S. Short Course..... | 138  | 107  | 85   |
| Specials .....          | 35   | 61   | 25   |
| Totals .....            | 1796 | 1767 | 1350 |

These figures by classes represent the attendance at about the same time of the fall term. They show a total increase of 29 over last year, 180 over two years ago, 190 over three years ago, and 446 over four years ago. They proclaim the steady growth of the great technical school of Kansas, but they also explain the crowded condition of the class rooms, laboratories and shops.

### ***The American Institute of Electrical Engineers.***

A special meeting of the American Institute of Electrical Engineers was held Friday, September 30, in room 60 of the chemistry building. These officers were elected:

H. H. Sloan, president; W. C. Lane, secretary; S. M. Ransopher, treasurer, and A. W. Seng, marshal.

Regular meetings are held monthly on the first Tuesday, in the chemistry building, room 60. All juniors and seniors interested in this line of work are invited to join the organization and to attend the meetings.

---

### ***To Have Bible Study Classes.***

The fraternities at K. S. A. C. will organize Bible study classes to meet in the fraternity houses once a week, probably Sunday mornings.

This was decided by the fraternities in a meeting in the Tau Omega Sigma house recently at which President Waters spoke. The meeting was a part of the Bible study campaign conducted by the Young Men's Christian Association. Clayton S. Cooper, of New York, who helped start the movement here to enroll Bible students, Coach "Mike" Ahearn, and E. T. Heald, Y. M. C. A. secretary, were also at this meeting and spoke briefly.

A Bible study course was conducted two years ago for frat men at one of the fraternity houses. No fraternity classes were conducted last year. The classes, this year, will be led by members of the faculty.

---

### ***It Started Long Ago.***

The idea that farmers should be business men, readers, educated along certain lines, is not so new as some folk imagine. In the *American Farmer* for March, 1824—published in Baltimore—the editor, J. S. Skinner, said:

"No longer is the practice of agriculture associated with the idea of mere brute force. Its votaries are expected to combine the polish and the pleasures of reading with better judgment in directing the labors of the field——."

Almost the same message is preached now daily to the farmers and farmers' son and daughters. It is the same message of better living, more application of brain power; the use of labor-saving machinery, all and everything tending to make of farming an occupation more attractive and profitable than it was eighty-six years ago when Editor Skinner wrote of an "uplift."



### *Local Notes.*

Harry Smith, a student in the animal husbandry course, is in the southwestern part of the state judging stock this week.

More cement walks are being built about the shops. No walk will be laid from the new Engineering Hall to Anderson Hall at present because of the unsettled fill recently graded.

The new steam turbine now in operation for three or four weeks is giving good service. It requires three boilers to supply the steam. The turbine can develop 300 horse-power. The college will not be troubled this winter by lack of power, as it was last year.

What has become of the proposed athletic field? The answer is west of the Domestic Science and Art Hall, where J. W. Rodgers, a contractor of this city, has ten teams and a large force of men clearing away the rubbish and grading the field. The work is being hastened. Mr. Rodgers says he will finish his part of the contract in six weeks.

The work of the new alumni athletic field in the southwest corner of the college grounds is progressing. Contractor Rodgers has a force of eight teams and fifteen men excavating and moving dirt to reach the required grade. They will soon start laying the tile to drain this large area. The field is expected to be in readiness for the baseball and track season next spring.

A number of small glass aquaria have been obtained by the entomology department for use in the elementary zoölogy laboratory. In these receptacles have been placed minnows, water bugs and various forms of water plants for the observation of the students. By thus placing the living animals before the students the department expects to make this course more interesting and therefore more instructive to the student.

"Peace" was the subject of a very interesting chapel talk by W. A. McKeever, of the philosophy department, at Wednesday's assembly. He told in figures of the great cost of the army maintenance, one shot of the largest cannon costing the government as much as the education of one Kansas boy. It is not the people who agitate for so large an army, he said. In fact, Prof. McKeever's talk was very straight and convincing.

Royal Purple, Volume III, will appear next spring as a college annual. That is the dictum of the senior class that has the publication in hand. It will be more representative of the institution as a whole, and will give more space to every department of student activity than have the previous annuals. It will not all be senior. It will be college. The committee is working on a plan for publishing the pictures of the college board of instruction in next spring's annual. The list has not been run since 1906, and owing to the many changes in the list the committee believes it would prove interesting. The idea also is in keeping with the plan of making the book a college annual rather than a classbook. Work on gathering the copy has begun and contracts soon will be signed with engravers and printers.

***Alumni and Former Students.***

The Alumni Association is to meet in the old chapel at 4:30 p. m., October 10.

Wilma Evans, '09, writes for her *Herald* from Houston, Texas, where she is teaching domestic science in the schools.

Harvey Adams, '05, is visiting about college and the city. He will return later to the Philippine Constabulary at Manila.

Laurenz Greene, '06, was a college visitor last Monday. Mr. Greene is instructor in horticulture in the state agricultural college of Iowa.

Miss Irene Taylor, '08 in the domestic science course, is at the Lambda Lambda Theta house for "rush," which is sorority for being entertained.

K. C. Manny was a campus visitor Monday. He is assisting in the picking and packing of forty thousand bushels of apples from the orchards of the Underwood Orchard company, near Hutchinson.

Born to Mr. and Mrs. A. N. H. Beeman, Leavenworth, Sunday, October 2, a daughter to whom they have given the name Miriam Maude. Mr. Beeman is a Kansas State Agricultural College graduate of '05.

P. J. Meenen, '09, and Miss Zoa M. Hollopeter, a former student, were married, September 20, in Oklahoma City. After spending a few days at the Kansas State Agricultural College they will go to Pennsylvania.

Howard M. Chandler, '03, who has been working in San Francisco and the Hawaiian Islands as architectural draughtsman, will be in Manhattan in a few days to visit the college. He intends to spend the winter at his home in Kansas City.

W. W. Lawton, '10, is spending a few days in Manhattan with friends and acquaintances. He is on the way from Stafford, where he has been doing civil engineering work since graduation, to points on the Pacific coast. He will visit Seattle, Portland, and possibly Los Angeles.

A. G. Kittell, '09, of the *Mail and Breeze*, visited in Manhattan, several days of last week. Mr. Kittell called on the department of industrial journalism and was well pleased with the work being done there. "I wish," he said, "that we had had such a department here when I was a student."

W. P. Tucker, '91, and Stella (Kimball) Tucker, '94, have just marketed a successful crop of pineapples from their ranch at Arcadia, Florida. They write of prospects for a fair crop of oranges and an excellent crop of grape fruit. Mr. and Mrs. Tucker are delighted with their southern home.



W. E. Watkins, '06, is now on his homestead in Colorado near Ft. Collins. Being close to the Colorado Agricultural College, he will take work leading to an advanced degree.

S. I. Wilkin, former student, has for the last year been secretary of the Farmers' Union at Hoxie, Kansas. He has been adding considerably to the comforts and luxuries of that community by shipping in car-loads of apples and potatoes that have been distributed through the agency of the union. Mr. Wilkin's successor has been elected. He and Bonnie (Adams) Wilkin, '99, and their small son are taking a wagon trip through Kansas to visit Manhattan and Olathe, Mr. Wilkin's former home. They also will visit points in Missouri, Oklahoma and Arkansas.

Changes of address: John S. Griffing, '77, Blackfoot, Idaho; C. E. Wood, '79, Bushyhead, Oklahoma; Ida (Quinby) Gardiner, '86, 1514 Laguna Street, Santa Barbara, California; C. A. Murphy, '87, Little River, Kansas; M. A. Carleton, '87, 1743 Kilbourne Street, Washington, D. C.; Stanley Snyder, '89, Dodge City, Kansas; John E. Thackrey, '93, 8368 Lucile Avenue, St. Louis, Missouri; Laura G. Day, '93, 417 Wabash Avenue, Wichita, Kansas; Gertrude (Lyman) Hall, '97, 415 Park Street, Madison, Wisconsin; C. E. Rice, '97, Bureau of Customs, Manila, P. I.; Mark Wheeler, '97, Fort Davis, Nome, Alaska; R. H. Pond, '98, College Station, Texas; Louise M. Spohr, '99, care of St. Luke's Hospital, Chicago; J. W. Harner, '00, and '09, Paris, Texas; Erma Locke, '01, Phillipsburg, Kansas; F. W. Haselwood, '01, and Maud (Zimmerman) Haselwood, '02, 1624 Bonita Avenue, Berkeley, California; C. A. Gingery, '02, Light, Arizona; H. B. Holroyd, '03, U. S. Forest Service, Fort Collins, Colorado; C. H. Kyle and Corinne (Failyer) Kyle, '03, North Augusta, South Carolina; Alexis J. Reed, '03, 6116 Colby Avenue, Oakland, California; R. N. Dorman, '04, 1525 N. Monroe Street, Topeka; Jas. G. Arbuthnot, '04, Corvallis, Oregon; C. A. Pyle and Vera (McDonald) Pyle, '04, Morrill, Kansas; Grace E. Umberger, '05, 509 Honore Street, Chicago; Smith Faris, '06, 624 S. Washington Square, Philadelphia; F. A. Kiene, '06, Fort Scott, Kansas; Cecile Allentharp, '07, Laramie, Wyoming; J. E. Cooley, '07, 1453 Adams Street, Chicago; Eva (Alspaugh) Zercher, '08, Tyler, Texas; George G. Goheen, '08, 16 N. College Street, Schenectady, New York; Leon G. Hoffman, '08, Yocemento, Kansas; O. H. Gish, '08, Bluemont, Virginia; Dan Walters, '08, Garden City, Kansas; H. S. Records, '09, Montpelier, Indiana; Jas. R. Coxen, '07, San Marcos, Texas; A. B. Carnahan, '05, Gilbert, Minnesota; Frank E. Uhl, '96, 817 Colorado Street, Manhattan, Kansas; O. L. Utter, '88, Eaton, Ohio; Claude Masters, '99, 118½ West Main Street, Oklahoma City, Oklahoma; Louis B. Bender, '04, Fort Monroe, Virginia; R. C. Thompson, '08, Fayetteville, Arkansas; Marcia Turner, '06, Fort Scott, Kansas; O. H. Halstead, '95, 305 N. Fifteenth Street, St. Joseph, Missouri; P. C. Milner, '91, 4227 N. Pauline Street, Chicago; L. W. Hayes, '96, 180 Twiss Avenue, Topeka; H. M. Bainer, '00, Amarillo, Texas; Charles F. Clark, after October 1, Bureau of Plant Industry, Washington.

# THE INDUSTRIALIST

Vol. 37

Saturday, October 15, 1910

No. 3

*Issued Weekly By*  
**Kansas State Agricultural College**  
*Manhattan, Kansas*



## STAFF

Pres. H. J. Waters, Editor-in-Chief  
Prof. C. J. Dillon, Managing Editor  
Dr. J. D. Walters, Local Editor  
Dr. J. T. Willard, Alumni Editor

~~~~~  
Published by
PRINTING DEPARTMENT
J. D. Rickman, Supt.

Entered at post-office, Manhattan, Kan., as second-class matter. Act of July 16, 1894.



Anderson Hall.

changed size with no 4. Rest of vol 37 and
vol 38 in newspaper Room.

THE INDUSTRIALIST

VOL. 37.

MANHATTAN, KAN., OCTOBER 15, 1910.

No. 3

Lusk on Nutrition.

Dr. J. T. Willard, Professor of Chemistry.

The need of a second edition of Lusk's "The Science of Nutrition" is in itself an indication of the favor with which the first edition was received. This book is not one designed to appeal to those desiring a popular presentation of questions of nutrition. It is written in a very much condensed style, but with great accuracy and clearness of statement. At times it reads almost like a set of lecture notes. It is exceedingly valuable for reference in that it includes so many of the actual tabulated results of experiments that lead to conclusions, rather than mere statements of the conclusions. The nutritive processes are so intricate in their complexity, and so difficult of investigation, that the ordinary reader or student often fails completely in getting a proper impression because of the easy dogmatic fashion with which much is written on these subjects. Comparatively few can observe experimentation for themselves, and it is of the greatest advantage to the others that we have a book of this character in which one may be brought in touch even if in shorthand fashion with the laborious and painstaking researches that constitute the foundation for our opinions concerning body processes.

One cannot fail to be impressed in reading such works with our absolute dependence upon the lower animals for the experimental data that enables us to understand ourselves as far as we do. While of course one cannot condone the infliction of unnecessary pain upon animals, the fact remains that we know very little concerning physiology that has not been gained through observation and experiment upon the lower animals.

The best mode of presenting a complex subject must always call for much thought on the part of the author, and diversity of method is the rule among those who have written on nutrition. Doctor Lusk's book consists of a series of chapters on definite subjects as related to the nutritive process, thus becoming very convenient for study of such special phases or conditions, though possessing some drawbacks as a systematic, logical presentation

of the whole. The body losses under starvation without labor are first presented as being those which represent the fewest factors of the nutrition problem. The effect of work and starvation together then receives attention. The regulation of temperature is the subject of the next chapter. This is developed in a thorough manner, and many whose reading has been confined to the more popular class of books would be much informed by a study of this chapter. The influence of protein food on metabolism, the specific dynamic action of the food stuffs, the influence of the ingestion of fat and carbohydrates, and the influence of mechanical work on metabolism are treated in the next chapters. Two chapters are then given to consideration of food requirements and these are followed by studies of the metabolism accompanying anemia, diabetes, fever, gout and other pathological conditions. These chapters are the most interesting in the book and are enriched by the results of many researches in which the author himself participated. A short concluding chapter is upon the theory of metabolism. This will be rather disappointing to one who expects to find there a satisfying statement of how and why the metabolic processes attendant upon life occur. This is not to be taken as a criticism of the author. Notwithstanding the laborious and enlightening researches epitomized in the preceding pages, the student is finally left in the presence of the unfathomed mystery of life. The last paragraph reads: "However clearly formulated the laws of metabolism may be, and many of them are as fixed and definite as are any laws of physics and chemistry, still the primary cause of metabolism remains a hidden secret of the bioplasm."

This second edition extends to less than four hundred pages, but is about twenty per cent larger than the first. The increase is due to the incorporation of the results of investigations of the three intervening years. As a condensed, systematic, scientific presentation of hundreds of experiments and investigational observations touching the nutritive processes of the animal body, Doctor Lusk's book is indispensable for every student of human nutrition.

In the class studying the history of education an unusual feature has been adopted by the students. A special library of reference books upon the subject has been ordered. These books, although paid for by the class, will be placed in the general library for reference.

After the Flour Mill Insects.

If there is one thing that bugs do hate it is hydrocyanic acid gas. Doctor Hyde did a lot to awaken interest in the possibilities of this product when he told of his experiments in that line to explain his purchase of cyanide. Every farmer in Kansas, and particularly every miller, read the proceedings of the trial and talked about the drug that could throw off such a deadly gas. It stirred their interest and, in a way that few might suspect, helped the experts from the Kansas State Agricultural College in their work of cleaning up the flour mills and driving out the thirty-eight or forty insects that do damage annually estimated at more than two million dollars. Just as war teaches geography so did the Hyde trial give a boost to cyanide and its products with the result that to-day, the experts say, farmers and millers everywhere in the state speak of the great insect destroyer as "Hyde Dope."

And it kills, too—no doubt of that. For years nothing had been done to offset the destruction for which these little pests were responsible, but this summer the Agricultural College has kept four men busy constantly in the work. These men have inspected more than 140 flour mills of the 250 in the State. They have told the miller exactly what to do and how to do it and, where requested have directed the work or have done it themselves; for, be it remembered that one breath of hydrocyanic acid gas will kill a human instantly. Caution is needed in its handling. The farmer or miller who sealed his grainary or mill and started this gas might not get away in time. For that reason it is recommended for use only by experts.

Only one of these thirty-eight or forty insects now causing so much trouble is a native of the United States; the others came in with seed wheat or other shipment from abroad. The worst of the whole family is the little rust red flour beetles, of which there are five or six varieties. Ninety per cent of the wormy flour in the world to-day was ruined by these beetles. Second in importance, but first in the damage they can do a mill, are the Mediterranean flour moths. In six months these busy little pests will clog and "enweb" the machinery in a flour mill so that it cannot run. In some instances it costs \$600 to clean the mill, where if scientific advice had been heeded the work might have been done for \$125.

The most interesting and important experiments and tests are now being conducted in the entomological department of the Agricultural College at Manhattan. George A. Dean, M. S., assistant professor of entomology, has charge of the work in this particular

field. Two men are studying the life habits of the insects so that farmers and millers may know how to attack them. Others are testing to learn how long is required to kill them with hydrocyanic acid gas; the eggs are studied; baking tests are conducted to determine the effects of the treatment upon flour. Probably the most interesting feature of the whole work is the incubator section and the display of the many pests with which farmers and millers have to contend.

"It must be a fight constantly, from the farmers to the people's stomachs," Professor Dean said yesterday. "We have found that although flour left a clean mill in excellent condition it would be infested before it arrived in New Orleans. Investigation showed the insects in cars on sidings, on wharves, in steamships and many other places. Only the most rigid rules and the most careful work in every state will wipe out these expensive pests. It must be a matter of interstate activity and coöperation. The millers of Kansas are organized and have men visit the East and South to study conditions and advise the proper course to pursue. The most important work, however, will be in the experiments now under way. We found the Mediterranean moth, for instance, in thirty mills in Kansas. We shall have to hustle to overcome the destructive habits of these pests; every state should help. The people's food is endangered."

When a mill is empty or only partly filled the K. S. A. C. experts under Professor Dean advise using hydrocyanic acid gas. It is a light gas and penetrates every part of the machinery and building but has little effect on the grain or flour. Where large stores of flour or grain are present carbon bisulphide is used. It goes through the grain and kills the insects. The experiments in the laboratory at Manhattan will show how deeply the bisulphide goes. Government experts declare flour and grain are not injured by the action of hydrocyanic acid gas or carbon bisulphide. The experiments now under way in the Kansas Agricultural College had been started when the Kansas millers association asked the college to take charge of the fumigating of mills throughout the state. Marine insurance, it was declared, could no longer be obtained on flour and grain shipments for export unless mills in which the shipments originated had been cleaned and fumigated. The college undertook the work this summer. Bulletins describing the progress of the investigations are to be published later.

Twenty Bible-study classes have been organized by the Young Women's Christian Association.

Why He Came to College.

Why does a young man come to the Kansas State Agricultural College? What does he expect to do afterward?

One young man, for instance, after graduation from high school, and an experience of four years covering work in selling men's clothing, walking one of Rockefeller's gas-pipe lines, and "cubbing" on a country daily, came to a realization that his field of activities as an untrained man was limited.

Looking about he saw men that had been working for the clothing merchant, in the town in which he lived, for a score of years, that were not getting much higher wages than he. But what he feared most was the deep and narrow rut in which they had gotten. He saw dissatisfied old men that had been working for Rockefeller since their youth. They feared they would lose their positions through the false witness of their fellow workmen or a drunken boss. When starting work on the pipe line the young man was taken aside by one of the head men and instructed regarding his attitude toward the public while in the employ of the company, which was in substance—tell them anything except the truth.

This wasn't what the young man desired. He wanted a chance to benefit the community in which he lived. To feel that his efforts were worth while, aside from money making. His work on the country daily strengthened his desire to get in a good live industrial college. "Keep out of a rut" was ever before him. Being convinced in his own mind, having a liking for agriculture from a three-years life on a farm, and realizing the possibilities of this field as a life work, he chose the Kansas State Agricultural College.

Upon graduation this young man expects to return home and get in some good licks for the rural population of the county. A farm on an interurban line will be purchased. A daily farm paper for that county will be started. The paper will contain a brief news report, live stock and produce markets, weather report and forecast, crop report of the county, rainfall, all the news of the county, and live farm topics in particular. The publication will be a morning paper, as the train service is such that all the larger towns of the county can be reached in time to give the farmer on the rural route his paper the same morning it is published.

The county in which this young man lives hasn't made much progress agriculturally the last ten years, as gas and oil have been found there. When a farmer gets \$5 an acre a year for a gas lease on his farm he loses interest in the hog business or the

dairy. He is more interested in the price of motor tires, how far he can run his car on a gallon of gasoline, and whether he had better drive through to visit the folks "back east," or have his "6 cylinder 60" shipped.

The high price of garden truck and other farm products has caused the pendulum to swing back. Farms that had been abandoned are being put under cultivation.

A herd of pure-bred dairy cattle and a herd of pure-bred hogs will be started by this college young man to prove to the farmers the possibilities of these two branches of animal industry, under the same climatic conditions, and with the same feed stuffs as are at their command.

The average yield of corn is not what it should be, and a variety of corn adapted to their needs will be bred to supply the farmers with pure-bred seed in an attempt to increase this yield. Z.

A Municipal Library Here?

Why not have in the Kansas State Agricultural College a municipal library? Why not have in this library the charters of the principal cities, and copies of the important franchises? At a small cost to the state a library of national importance could be gathered and maintained.

American city government is, and will continue to be, the subject of discussion. Perhaps of all evils practiced upon the non-suspecting public nothing has been so flagrant and malicious as the charters and franchises framed by selfish politicians. Cities throughout America are laboring under such unjust bonds—agreed upon to be sure, but agreed upon only because of ignorance upon such matters.

American cities have paid dearly for this experience. Many cities have become aroused and have adopted new charters and have refused to renew franchises, except when just both to themselves and to the corporations. The cities of America are in the process of rebuilding.

It is worth the time and money spent by an educational institution touching the masses as does the Kansas State Agricultural College, to place before its constituency an array of evidence gathered from many cities. If Kansas towns are to avoid these snags; if Kansas towns are to remain an unrestricted and free institution, it will be only by enlightening the people upon such questions.

The Kansas State Agricultural College is an excellent place for such a library. It would soon prove itself invaluable to debaters, for subjects bearing upon such statistics are excellent for college discussion. It would be a great help to classes, as assigned readings could be made to the various forms of charters, the evils of one franchise and the good points of another.

The benefits derived from such a library would be important to the student and it would also be important to inquiring cities. Perhaps a town now is offered a street-car franchise for fifty years and to them it seems an excellent opportunity for the old town. The officials visit the library of municipal charters at the Kansas State Agricultural College and find that just such a franchise was adopted by another city and that that city has been a subject of prey ever since.

Kansas has been a leader in the new form of city government by a commission which makes it even more necessary for such a library to be established here. This is the coming field of action. Kansas people are awaking and demanding a change from machine control.

G. B. H.

Four Bird Families in Disgrace.

A death sentence has been pronounced upon four families of birds in Kansas: Sparrows, blackbirds, crows, and jay-birds.

The sentence is legal in the case of two of these families. Public opinion is responsible for the others' fate.

Many persons believe these four bird families do more damage than good to crops. There is an almost uniform bounty of five cents apiece for crows and a smaller, less uniform bounty for sparrows. Blackbirds and jays have so far escaped a bounty, but they are under fire of the farmers to almost as great a degree as crows.

Sparrows have fewer redeeming characteristics than any of the others. They do much damage to crops, especially to the small grain crops, and do very little to compensate a farmer for letting them live.

Although blackbirds do much damage to corn and other crops, credit must be given them for partly paying their board by catching worms and insects. While young they live wholly upon insects. The old birds will follow the plow in the spring and pick up all the grubworms, after scratching them out of the loose soil. The greatest damage done to crops by this bird is in the spring when the corn is coming up. The birds eat the seeds and scatter the plants. In some communities they also eat much of the corn

when it is in the milky stage. Their appetite for insects is all that saves them, and the scales are so evenly balanced that it is still a question whether the blackbird should be killed. Public sentiment is constantly growing in favor of his destruction.

The habits of the crow are very similar to those of the blackbird. Crows do more damage in the fall after the crop is cut and shocked than before it is cut. They are not such great insect destroyers as are the blackbirds, but they make up for this deficiency by their work as scavengers. Where crows are numerous it is almost impossible to get a good stand of corn or any other crop that grows slowly at first. They became so numerous a few years ago as to be a menace. The law providing for a bounty on crows' scalps was the result.

The jay is more of a nuisance than the others. His greatest fault is robbing the nests of other more desirable birds. He not only destroys the eggs but if the young are hatched he kills them. His greatest enemy is the owl, a very useful bird. Because of his destructiveness the jay-bird has been sentenced, by public opinion, to execution.

The blackbird's death is not generally conceded to be a necessity. Unless they become too numerous the destruction they do will be more than balanced by the good service. As they now are in Kansas they should be looked upon as an economic good and not be destroyed.

First Meeting of the Science Club.

The Science Club held its first meeting Monday night, October 3. The paper of the evening was by Thomas B. Haslam, assistant in the department of veterinary science, and was devoted to the discussion of his investigations upon blind staggers in horses and its relation to pellagra in man.

Blind staggers is caused apparently by horses eating mouldy corn. Feeding experiments with mouldy corn resulted in the death of the five animals experimented with, within a period of from 40-50 days. Pure single-spore cultures were made of each of the species of moulds found on the corn, and of one species of bacterium. The principal mould species were also studied with respect to their relative occupation of the ear in point of area. From the pure mould cultures larger cultures in sterile stone jars were then grown under conditions which precluded contamination. The culture medium in the jars was sterilized green corn, ground moderately fine. The cultures penetrated this medium and grew

luxuriantly to the very bottom of the jars. One-quarter of the mould culture in a jar for each of the principal species under experiment has been fed at a feeding to horses for a period now reaching 80 days, with absolutely no injurious effect to the animals whatever. The quantity of mould fed was found to be all that the animal would permit in his food without rejecting it, and was far in excess of what horses would ever find and eat in the field. In view of the fact that the ears of mouldy corn caused death when fed to the horses, whereas the pure mould cultures did not, a theory was raised of a toxin in the corn itself, independent of the moulds, and attention was directed to the proteids of corn. An extract was made of the proteid of corn taken from immature ears. A small quantity of this proteid extract, given to rabbits in the stomach, resulted in death within a few hours. A sufficient quantity of the extract to furnish doses for a feeding experiment with horses has not yet been obtained. The experiment will not be fully concluded until the close of another season, but the prospects are that the cause of blind staggers, and perhaps also of pellagra, will be definitely ascertained as a result of this experiment. The present outlook is that the cause of blind staggers is not to be found in the species of mould growing on the corn, but in a toxin in immature corn, being possibly in one of the proteid compounds.

Mr. Haslam's paper was one of the best that has ever been presented to the Science Club, and was thoroughly appreciated. The club is to meet the first Monday night in November.

How Things Are Made.

How many women know anything of the tools, utensils and materials they use? Not many.

Usually it is enough if they have a thimble, or a bread knife, or buttons. How and where they were made, and why, the average woman doesn't know. If the men know more they seldom give any proof of it.

Several exhibits in the office of Antonetta Becker, professor of domestic art in the Kansas State Agricultural College, are exceptionally interesting. The exhibits are used by Miss Becker in her lectures to the girls of her department.

Miss Becker brought the exhibits from the East this fall after her vacation. One shows the steps in the making of a pair of shears from the rough casting to the completed tool, polished and ready for use.

The needle in the making will be the subject of one lecture. The cutting from a steel wire coil; the straightening and pointing; stamping, grooving and eyeing; the burnishing and hardening; cleaning and polishing; how they are sorted, wrapped and labeled—every step will be explained briefly but clearly.

The exhibits include the thimble and its evolution from a piece of German silver to the finished article, and buttons made from the Ivory nut. The several talks will lead up to the more practicable part of the course. Textiles will be studied carefully. A hand loom has been ordered from a Boston firm for the use of the girls. Weaving will receive considerable attention, with especial reference to the selecting of cloth. No department store clerk will be able to palm off inferior goods on the girl graduates of the agricultural college. Rugs must be as represented. The girls will know what they want and whether they get what they want when they ask for it.

The enrolment, this fall, in the domestic science and art departments includes, in addition to Kansas girls, students from Kansas University, Baker, Washburn, State Normal, Midland College, Chicago University, Purdue (Indiana), and Louisiana.

The Printing Course as an Asset.

Can you spell? Punctuate? Can you write a letter that gives the reader a clear and exact idea of what you are trying to tell him? If not, and there are few who can, a course in printing will do wonders for you.

In the business world, to-day, the man that can write a letter describing whatever project he may be pushing clearly and concisely has an advantage over one that may have the same executive ability but lacks the power of expression.

A course in printing teaches accuracy, neatness, exactness. The author that has worked in a print-shop will be likely to send in his copy correctly written the first time, and not in such condition that he must revise it after it has been set up, perhaps necessitating changing half a column to allow an extra clause to be inserted.

No better place than the print-shop for teaching the value of punctuality can be found. The printer in business will have his advertising ready; he will answer his letters on time; he will be at work on time and all the time.

A knowledge of printing composition, ad.-setting, pressroom work, is an essential to the young student in journalism that

hopes some day to edit a paper. He will be more than repaid for the time and money spent in taking the work by knowing whether his employees are doing the work they should be doing. The man that knows always has an advantage over the man that depends upon others to tell him.

The newspaper man should have a knowledge of printing; the business man that is something of a printer is that much more of a business man.

How About Those Nurses?

Where was the nursery and why weren't the nurses "on the job" last Monday night? Six babies with lungs in excellent condition were taken through the lines at the first number of the lecture course—which, happily, was a concert—and every baby did what it could at times to keep Ferullo guessing about which could make the most noise: the band or the babies. They were quiet for awhile, as most babies are. It was in the most tragic part of the Carmen number that the little sextette broke in.

The dagger had been withdrawn, and the band "resting" in the hush of death, just preceding the sobbing of the reed instruments and the wailing of the brasses. Suddenly two or more little mouths were opened and shrieks of anguish arose. The offenders were quickly removed, but John Z's guards are disgraced.

The Y. M. C. A. Record 563.

The membership of the Y. M. C. A. is the largest in the history of the local association. Five hundred and sixty-three men are now on the rolls with more joining every day. The gymnasium work under O. C. Thompson is proving very popular.

The fall campaign for memberships was closed Tuesday night with a supper at the Presbyterian chapel in honor of the team getting the most members.

Erwin Fuller's team won with a record of 42. Fuller also won the watch fob, offered for the best individual record, by talking 35 men into the association.

J. C. Cunningham acted as toast-master at the supper. A. R. Springer, B. F. Eyer, professor of electrical engineering, O. C. Thompson, Erwin Fuller, Warren Crabtree, Clif Stratton and E. T. Heald responded to toasts.

Local Notes.

Dr. K. W. Stouder is in South-central Kansas on cattle work.

Henry Miller, a farmer from Abilene, Kansas, was visiting the college, Thursday.

The room used last year for the engineers' society hall is being converted into a pattern room for the foundry.

W. P. Shuler returned Thursday from Topeka, where he has been testing cattle for tuberculosis.

Dr. E. F. Kubin, of the veterinary department, is in Northwestern Kansas this week vaccinating hogs for cholera.

Two teachers in the public schools of Manhattan are studying vocal music and water-color work in the college Saturday classes.

H. Ray Anderson, a senior in the general science course, has been appointed laboratory assistant in the senior psychology classes.

The membership of the Y. W. C. A. is growing steadily. Flora Hull, general secretary, expects an increase of 100 over last year's record of 450.

The noon hour for the shops and power plant has been made to correspond with that of the college. The whistle will blow at 7:30, 12:30, 1:30 and 5:30.

R. P. Evans, county attorney of Riley County, was showing his cousin, Mr. Conway, of Chicago, the college and campus, Tuesday. Mr. Conway was very much interested in the work of the college.

The class in methods of study has become so large that a second class had to be organized. E. L. Holton, professor of rural education in the extension department, has been placed in charge of one of these classes.

Mrs. Mary VanZile, dean of home economics, attended the convention of the State Federation of Women's Clubs of Kansas at Horton, Tuesday and Wednesday. She read a paper, Wednesday afternoon, on "Balanced Rations."

Classes in blacksmithing have been arranged for. A drill press, an emery stand having two wheels, one coarse, the other fine, and a cutting machine that cuts all sizes of iron up to $\frac{3}{4}$ inch, round or square, have been installed.

G. Eldon Thompson arrived Monday from Akron, Colorado, where he had charge of the forage crops division of the U. S. Bureau of Plant Industry this summer. He has taken an assignment and will resume his studies here.

The agronomy department will use its section of the new greenhouse to grow grains, grasses and fiber crops for class-room use. In addition to the common plants, tobacco, cotton and other crops not commercially grown here will be produced so the students may know their habits of growth.

The power plant was shut down for a few days this week to give an opportunity to install an economizer. This will connect the three high-pressure boilers with the flue. Its purpose is to heat the water before it enters the boilers. It is estimated will make a saving of about 10 per cent in coal.

Visitors at the college usually go first to the domestic science building. This is the belief of the domestic science "family," at any rate. A guard stationed in the building would be kept busy. Ten to twenty visitors a day takes too much of the instructors' time. Every visitor desires all the details explained.

An Ayrshire calf that weighed 23 pounds two days after the stork left it at the dairy barn has received much attention the last week. Now, 23 pounds isn't much for a calf, but this one's mother is only two years old and not very large. The calf referred to is the smallest the dairy barn has had to shelter for a very long time. But it is apparently healthy and doubtless will become a prize-winning steer some day.

It is now Captain Charles H. Boice. The commission, effective October 1, was received Friday. Captain Boice went into the Spanish-American war as a private in the First N. Y. Volunteers. He was twice recommended for promotion in the Philippines for meritorious conduct in action. His term as commandant at this college will end a year from next month. He probably will go to the Philippines with the Eighth Cavalry.

It was an unusual thing, until about two years ago, for an instructor to receive typewritten laboratory notes and themes. Now it has become a custom, for the student looks for the return of his notes that they may be filed and bound for later use. Fewer than ten typewriters were used two years ago by the students at K. S. A. C. Now that number would have to be multiplied by ten; perhaps more. Anyway, one agency in the city has developed a large rental business; and many students own their own machines.

President Waters reports the total cash contributions to the fund for the construction of the new athletic field last Thursday at \$687.40. The cash amounts received since August 11 are as follows:

Geo. Wolf, '05.....	\$10 00
Victor L. Cory, '04.....	2 50
Amy Allen, '04.....	5 00
Jessie Allen, '08.....	5 00
E. S. Adams, '98.....	10 00
H. Umberger, '05.....	5 00
L. W. Lawson, '07.....	5 00
Harvey A. Burt, '05.....	5 00
May (Harris) Burt, '05.....	5 00
Alfred H. Baird, '07.....	5 00
F. A. Kiene, '06.....	15 00
Helen B. Thompson, '03.....	5 00
Frank C. Harris, '08.....	5 00
A. G. Philips, '07.....	5 00

Two of these contributors have subscribed for larger amounts, but are paying their contributions by installments.

Alumni and Former Students.

Frank C. Lewis, a senior last year, is teaching manual training and science in the high school at Ritzville, Washington.

F. A. Lane and Mrs. Lane, of Burlington, Kansas, are visiting Mr. Lane's brother, W. C. Lane, '05, assistant in electrical engineering.

Claudius Stewart, '06, is working for the Canadian government. He is in the Alberta's northwest country in the electrical engineering department.

Mr. and Mrs. C. V. Holsinger, both '95, announce the birth of a son Tuesday, October 11. Mr. Holsinger is connected with the extension department of the college.

Guy D. Noel, '09, visited the home folk last Sunday. Mr. Noel has charge of agriculture, manual training and athletics of the Dickinson county high school at Chapman, Kansas.

Lester Allen Ramsey, '06, was here for the football game with the State Normal. Mr. Ramsey is erecting ice and refrigeration plants for the York Manufacturing Company, of York, Pa.

Fred Walters, contractor, is building, in the Hammond addition, a home for Harry Brown, assistant professor of music. The plans were drawn by H. Winter. Walters, Brown and Winter are alumni of the college.

William DeOzro Davis, '04, better known as "Skelly," was in Manhattan for the Aggie-Normal football game, October 8. He is assistant chief electrician of the mechanical department of the Atchison, Topeka and Santa Fé, at Topeka.

E. H. Webster, '96, dean of agriculture, and Albert Dickens, '93, professor of horticulture, were elected members of the board of directors at a special meeting of the Alumni Association Monday, October 10. No other business was transacted. The attendance was small.

One of the most interested visitors to the National Dairy Show in Milwaukee was T. Ogawa, scion of wealthy Japanese parents and a graduate of the Kansas State Agricultural College. He was accompanied by A. Miyawaki, assistant dairy instructor in the Kansas institution. Mr. Ogawa is employed on the farm of L. G. Oder, Juda, Wisconsin, and is now working as a practical dairyman and butter maker, preparatory to returning to Japan, there to join others in the development of dairying in his own country.

H. W. Brinkman, architect, '07, writes to Professor Walters from Emporia: "Have not written you for some time, but there is a good excuse—I have been overloaded with work. There is work enough in my office to last at least four months. I have 21 jobs on hand, ranging from about \$10,000 up to \$50,000. Besides, I am supervising the construction of a \$300,000 Catholic cathedral in Wichita, for which plans were drawn by Mas Mergne, of Milwaukee. So you see I am well occupied. I wish D. W. had stayed with me."